- 1. I need a search on the compounds of claim 1. The priority date is 08/06/1993.
- 1. A method of inhibiting neovascularization in a mammal, comprising administering to the mammal a neovascularization-inhibiting amount of a compound of the formula:

13

wherein, Ra is -OR1 or -OCOR1, wherein R1 is -H, or a substituted or unsubstituted alkyl, alkenyl or alkynyl group of up to 6 carbons.

- 2. The method of Claim 1, wherein R₈ is -OR₁.
- 3. The method of Claim 1, wherein Rg is -OCOR1.
- 2. If there are too many hits, it can be narrowed down by including the terms neovascularization or angiogenesis or anti-angiogenic.

FILE 'REGISTRY' ENTERED AT 12:12:31 ON 09 JAN 2009
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 8 JAN 2009 HIGHEST RN 1093060-06-0 DICTIONARY FILE UPDATES: 8 JAN 2009 HIGHEST RN 1093060-06-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

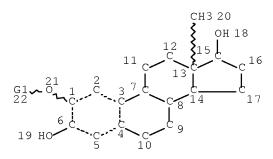
TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

L1 STR



VAR G1=H/C NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RSPEC I

NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

L2 (269)SEA FILE=REGISTRY SSS FUL L1

L3 STR

VAR G1=OH/23/25/27

NODE ATTRIBUTES:

CONNECT IS X2 RC AT CONNECT IS X2 RC AT CONNECT IS X2 RC AT 9 CONNECT IS X2 RC AT CONNECT IS X2 RC AT CONNECT IS X2 RC AT CONNECT IS X3 RC AT 15 CONNECT IS X2 RC AT CONNECT IS X2 RC AT DEFAULT MLEVEL IS ATOM GGCAT IS LOC AT 24 GGCAT IS LOC AT 29 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE

L4 61 SEA FILE=REGISTRY SUB=L2 SSS FUL L3

L5 44 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND NR=4

FILE 'CAPLUS' ENTERED AT 12:12:31 ON 09 JAN 2009
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FILE COVERS 1907 - 9 Jan 2009 VOL 150 ISS 3 FILE LAST UPDATED: 8 Jan 2009 (20090108/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

	Ans. set limited to patent/non-patent citations dated prior to 1993
L6 1604 SEA ABB=ON PLU=ON L5 L7 543 SEA ABB=ON PLU=ON L6 AND (PY<199 L8 0 SEA ABB=ON PLU=ON L7 AND (NEOVAS OR ANGIOGENESIS OR ANTIANGIOGENESI ANTIANGIOGENETIC? OR ANGIOSTATIC?	ASCULAR? OR NEO VASCULAR? SIS OR ANGIOGENETIC? OR
L9 (29752)SEA FILE=CAPLUS ABB=ON PLU=ON AN	NGIOGENESIS+PFT/CT
L10 (11677) SEA FILE=CAPLUS ABB=ON PLU=ON "A	ANGIOGENESIS INHIBITORS"+PFT/CT
L11 (6674) SEA FILE=CAPLUS ABB=ON PLU=ON "A ARIZATION"+OLD/CT	ANGIOGENESIS (L) NEOVASCUL
L12 (1547) SEA FILE=CAPLUS ABB=ON PLU=ON "F+OLD, PFT/CT	EYE (L) NEOVASCULARIZATION"
	ANGIOGENESIS (L) NEOVASCUL
	L9 OR L10 OR L11 OR L12
L15 0 S L7 AND L14	
L16 172 SEA ABB=ON PLU=ON L6 AND ((NEOVA OR ANGIOGENESIS OR ANGIOGENETIC OF ? OR PREVENT?) OR ANTIANGIOGENESIS OR ANGIOSTATIC?) OR ANTIANGIOGENES	OR ANGIOSTATIC) (5A) (INHIBIT S OR ANTI(W) (ANGIOGENESIS
L17 43 SEA ABB=ON PLU=ON L16 AND EYE	
L18 33 SEA ABB=ON PLU=ON L17 AND (ADMIN	N? OR DRUG(3A)DELIVER?)
L19 168 SEA ABB=ON PLU=ON L6 AND L14 E EYE DISEASES+ALL/CT E E2+ALL	
L20 29258 SEA ABB=ON PLU=ON "EYE, DISEASE"	G"+OLD, PFT/CT
L21 32 SEA ABB=ON PLU=ON L19 AND L20 E DRUG DELIVERY SYSTEMS+ALL/CT	
L22 180932 SEA ABB=ON PLU=ON "DRUG DELIVER"	RY SYSTEMS"/CT
L23 23 SEA ABB=ON PLU=ON L21 AND L22	
L24 33 SEA ABB=ON PLU=ON L18 OR L23	
DOCUMENT NUMBER: 150:11060 TITLE: Biodegradable drug delive	ery
<pre>system comprising extende INVENTOR(S): Lyons, Robert T.; Burke, Michael R.</pre>	led release ocular implants James A.; Robinson,
PATENT ASSIGNEE(S): Allergan, Inc., USA SOURCE: U.S. Pat. Appl. Publ., 19 CODEN: USXXCO	9pp.
DOCUMENT TYPE: Patent LANGUAGE: English FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080292679	A1	20081127	US 2007-753419	20070524
PRIORITY APPLN. INFO.:			US 2007-753419	20070524

AB A drug delivery system (DDS) comprised of segmented biodegradable implants sized and suitable for implantation in an ocular region or site and methods for treating ocular conditions. The segmented implants provide an extended release of an active agent at a therapeutically effective amount for a period of time between 50 days and one year, or longer, and permit the DDS to have segments that possess individual and different drug release characteristics. Thus, implant to treat an ocular condition according to the present invention can contain a steroid, such an antiangiogenesis steroid, such as an anecortave, as the active agent; the implant can be loaded with a total of about 15 mg of the anecortave. The anecortave acetate extended release implant system can be implanted into an ocular region or site (i.e. into the vitreous) of a patient with an ocular condition for a desired therapeutic effect; the ocular condition can be an angiogenic condition or an inflammatory condition.

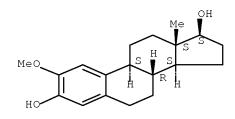
IT 362-07-2, 2-Methoxyestradiol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (biodegradable drug delivery system comprising extended release ocular implants)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 2 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2008:1251831 CAPLUS Full-text

DOCUMENT NUMBER: 149:478451

TITLE: Antitumor formulations including SPARC proteins,

antitumor agents, and angiogenesis

inhibitors

INVENTOR(S): Trieu, Vuong; Desai, Neil P. PATENT ASSIGNEE(S): Abraxis Bioscience, Inc., USA SOURCE: U.S. Pat. Appl. Publ., 38pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080255035	A1	20081016	US 2008-102383	20080414
WO 2008128169	A1	20081023	WO 2008-US60213	20080414

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2007-923340P P 20070413

The invention provides methods of treating a mammalian tumors comprising AB combination therapy with SPARC proteins, an angiogenesis inhibitor and paclitaxel. The invention provides also methods of treating a mammalian tumors comprising combination therapy with SPARC polypeptides and paclitaxel. Paclitaxel is typically solubilized with albumin, and albumin interacts with SPARC proteins to form a stable complex. SPARC protein will then bind the complex to SPARC presented on cells, which is typically on a tumor cell in a mature human. This results in more efficient delivery and uptake of the paclitaxel. Further, the invention produces kits and methods to predict therapy responses.

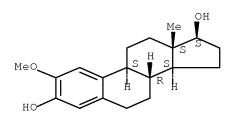
362-07-2, 2-Methoxyestradiol ΙT

> RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (in cancer therapy; antitumor formulations including SPARC proteins, antitumor agents, and angiogenesis inhibitors)

362-07-2 CAPLUS RN

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2008:191482 CAPLUS Full-text

DOCUMENT NUMBER: 148:246490

TITLE: Conveniently implantable sustained release drug

compositions

INVENTOR(S): Wong, Vernon G.; Wood, Louis L.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 54pp., Cont.-in-part of

U.S. Ser. No. 236,426.

CODEN: USXXCO

DOCUMENT TYPE: Patent English LANGUAGE:

FAMILY ACC. NUM. COUNT: 2 PATENT INFORMATION:

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	2008						2008	0214	US	2007-	-=== -8268	33		-	20070	718
	2006						2006	0406	US	2005-	2364	26			20050	927
AU	2005	29214	45		A1		2006	0413	AU	2005-	2921	45			20050	927
CA	2582	096			A1		2006	0413	CA	2005-	2582	096			20050	927
EP	1793	803			A2		2007	0613	EP	2005-	8040	34			20050	927
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										L, PL,						
CN	1010	60833	1		Α		2007	1024	CN	2005-	8003	9775			20050	927
	JP 2008514719							0508								
	BR 2005016830									2005-					20050	
	2007									2007-					20070	0402
IN	2007	100MM	515		Α		2007	0803		2007-					20070	409
KR	2007	08390	01		Α		2007	0824		2007-					20070	
PRIORIT	Y APP	LN.	INFO	. :					US	2004-	6144	84P		Р	20041	1001
									US	2005-	7096	65P		P	20050)819
									US	2005-	-2364	26		A2	20050	927
									US	2006-	-8319	91P		Р	20060	719
									WO	2005-	-US34	822		W	20050	927

OTHER SOURCE(S): CASREACT 148:246490

This invention provides biocompatible and biodegradable syringeable liquid, implantable solid, and injectable gel pharmaceutical formulations useful for the treatment of systemic and local disease states. Thus, 760 mg of tri-Et O-acetyl citrate (TEAC) was mixed with 240 mg of dexamethasone (Dex) and 6 mg (25 μ L) and 12 mg (25 μ L) microdrops of this mixture were each incubated in 10 mL of 0.9% saline at 37°. A sustained release of dexamethasone from a formulation consisting of 24% Dex in TEAC was observed However, adding tocopherol acetate to the TEAC excipient at the ratio of 1:1 can extend the sustained release of therapeutic levels of Dex up to 450 days.

IT 362-07-2, 2-Methoxyestradiol

RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(injectable biocompatible and biodegradable implantable sustained release drug compns.)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

L24 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2007:795851 CAPLUS Full-text

DOCUMENT NUMBER: 147:243194

TITLE: Composition of antitumor sustained-release

injection or implant preparation containing

angiogenic inhibitors

INVENTOR(S): Sun, Juan; Zhang, Hongjun; Yu, Jianjiang PATENT ASSIGNEE(S): Jinan Shuaihua Pharmaceutical Science and

Technology Co., Ltd., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 29pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 100998555	A	20070718	CN 2007-10200065	20070116
PRIORITY APPLN. INFO.:			CN 2007-10200065	20070116

AΒ The sustained-release preparation(injection or implant) is composed of sustained-release microsphere comprising biol. effective ingredient 0.01-60, sustained-release adjuvant 41-99.99 and suspending agent 0.0-30 wt%; and solvent. The biol. effective ingredient is angiogenic inhibitor, and antitumor agent selected from alkylating agent, purine analog and/or hormones, and the ratio of angiogenic inhibitor to antitumor agent is 1-19:1 to 1:1-19. The sustained-release adjuvant is selected from polylactic acid, polifeprosan, xylitol, oligosaccharide, etc. The suspending agent is selected from sodium CM-cellulose, iodine glycerin, dimethylsilicone oil, etc. The alkylating agent is selected from cyclophosphamide, melphalan, chlorambucil, etc. The purine analog is selected from benzyl quanine, O6-benzyl quanine, O6-Bu guanine, etc. The hormone is selected from anastrozole, idoxifene, tamoxifen, etc. The angiogenic inhibitor is selected from one of vandetanib, tipifarnib, sirolimus, tacrolimus, lenalidomide, or exatecan, or the mixture thereof. sustained-release preparation may be used for preparing the medicine for treating primary or secondary cancer, sarcoma or sarcocarcinoma originated from human or animal cerebrum, central nervous system, etc.

IT 362-07-2, 2-Methoxyestradiol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (composition of antitumor sustained-release injection or implant preparation

containing angiogenic inhibitors)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

L24 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2007:619578 CAPLUS <u>Full-text</u>

DOCUMENT NUMBER: 147:46112

TITLE: Treatment of cancer and other diseases

INVENTOR(S):
Habib, Nabil

PATENT ASSIGNEE(S): Nabil Habib Lab, Lebanon; Vianova Labs, Inc.

SOURCE: PCT Int. Appl., 86pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

WO	2007	06469	91		A1		2007	0607	•	WO 2	006-	US45	665		2	0061	130
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		CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	
		GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	
		KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	
		MA,	MD,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	
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		SY,	ΤJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW
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CA	2632	903			A1		2007	0607	1	CA 2	006-	2632	903		2	0061	130
ΕP	1968	607			A1		2008	0917		EP 2	006-	8446.	23		2	0061	130
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		ΙE,	IS,	ΙΤ,	LI,	LT,	LU,	LV,	MC,	ΝL,	PL,	PT,	RO,	SE,	SI,	SK,	TR

OTHER SOURCE(S): MARPAT 147:46112

The present invention relates to a novel compound (e.g., 24-ethyl-cholestane- 3β , 5α , 6α -triol), its production, its use, and to methods of treating neoplasms and other tumors as well as other diseases including hypercholesterolemia, autoimmune diseases, viral diseases (e.g., hepatitis B, hepatitis C, or HIV), and diabetes.

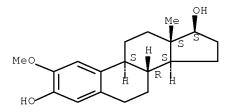
WO 2006-US45665 W 20061130

IT 362-07-2, 2-Methoxyestradiol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2007:563324 CAPLUS Full-text

DOCUMENT NUMBER: 147:2055

TITLE: Integrin-binding small molecules INVENTOR(S): Neamati, Nouri; Dayam, Raveendra

PATENT ASSIGNEE(S): University of Southern California, USA

SOURCE: PCT Int. Appl., 112pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PAT	CENT 1	NO.			KIND DA'					APPL:	ICAT	ION I	NO.		D2	ATE	
WO	2007	0591	95		A1		2007	0524	,	WO 2	006-	US44.	305		2	0061	114
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		GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	
		KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	
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CA	2629	815			A1		2007	0524	1	CA 2	006-	2629	815		2	0061	114
US	2007	0155	750		A1		2007	0705		US 2	006-	5598	57		2	0061	114
EP	1959	958			A1		2008	0827		EP 2	006-	8376	43		2	0061	114
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		IE,	IS,	ΙΤ,	LI,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR
ORITY APPLN. INFO.:				.:					,	US 2	005-	7367	80P]	P 2	0051	114

OTHER SOURCE(S): MARPAT 147:2055

AB The present invention relates in general to integrin-binding small mols. More specifically, the invention provides novel compns. and methods of using these compns. for treating various diseases. Accordingly, in one aspect, the invention features a composition comprising a compound, or a pharmaceutically or cosmeceutically acceptable salt, solvate, or hydrate thereof, wherein the compound comprises one H-bond donor (HBD), one H-bond acceptor (HBA), two

WO 2006-US44305

W 20061114

hydrophobic aromatic groups (HAR1 and HAR2), and one neg. ionizable group (NI).

IT 362-07-2, 2-Methoxyestradiol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

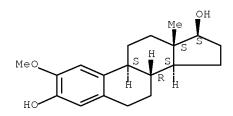
(Biological study); USES (Uses)

(integrin-binding small mols. for treatment of diseases and combination with other agents)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 7 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2007:561763 CAPLUS <u>Full-text</u>

DOCUMENT NUMBER: 146:494108

TITLE: Anti-angiogenic activity of 2-methoxyestradiol in

combination with anti-cancer agents

INVENTOR(S): Plum, Stacy M.; Strawn, Steven J.; Lavallee,

Theresa M.; Sidor, Carolyn F.; Fogler, William E.;

Treston, Anthony M.

PATENT ASSIGNEE(S): Entremed, Inc., USA SOURCE: PCT Int. Appl., 49pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PAT	PATENT NO.				KIN	D	DATE			APPL	ICAT	ION :	NO.		D	ATE	
WO	 2007	 0591	 11		A2	_	2007	0524		 WO 2	 006-	 US44	 152		2	0061	 114
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PRIORITY APPLN. INFO.:

US 2005-736220P P 20051114

US 2006-788354P P 20060331

AB The present invention relates generally to methods and compns. of treating disease characterized by abnormal cell proliferation and/or abnormal or undesirable angiogenesis by administering antiangiogenic agents in combination with chemotherapeutic agents. More specifically, the present invention relates to a methods and compns. of treating diseases characterized by abnormal cell proliferation and/or abnormal or undesirable angiogenesis by administering 2-methoxyestradiol, in combination with chemotherapeutic agents.

IT 362-07-2, 2-Methoxyestradiol 165619-07-8,

2-Ethoxyestradiol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

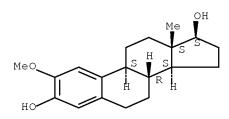
(anti-angiogenic activity of 2-methoxyestradiol and other

estradiols in combination with anti-cancer agents)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

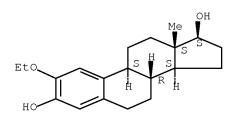
Absolute stereochemistry.



RN 165619-07-8 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-ethoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L24 ANSWER 8 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2007:356982 CAPLUS Full-text

DOCUMENT NUMBER: 146:330836

TITLE: Anti-inflammatory anti-vascular VEGF agent

compositions for the eye

INVENTOR(S): Peyman, Gholam A.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 11pp., Cont.-in-part of

U.S. Ser. No. 234,970.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

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US US WO	2007 2007 2007 2007	0071 0071 0384	756 754 53		A1 A2		2007 2007 2007 2007	0329		US 2 US 2	006- 005-	3480 2349	17 70		2	0060206 0050926 0060926
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PRIORITY	APP:	ZW,	AM,	AZ,	•	•	LS, KZ,	•	RU,	TJ, US 2 US 2	TM, 005-	AP, 2349 3480	EA, 70	EP,	OA A 2	ZM, 0050926 0060206 0060206

AB A method delivering an anti-vascular endothelial growth factor (VEGF) agent to ameliorate inflammation at a site in the body that may be the eye, a joint, the brain, etc. or to reduce corneal neovascularization is described. In one embodiment, one or more other agents, such as non-steroidal anti-inflammatory agents, steroids, etc., may be included with the anti-VEGF agent. The anti-VEGF agent may be bevacizumab, ranibizumab, sunitinib maleate, pegaptanib, etc. Bevacizumab reduced corneal neovascularization in rats compared to controls.

IT 362-07-2, 2-Methoxyestradiol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (anti-inflammatory anti-vascular VEGF agent compns. for the eye)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

L24 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2007:17802 CAPLUS Full-text DOCUMENT NUMBER: 146:100917 Full-text

TITLE: Preparation of 2-methoxyestradiol analogs as

antiangiogenic agents

INVENTOR(S): Agoston, Gregory E.; Shah, Jamshed H.; Suwandi,

Lita; LaVallee, Theresa M.; Treston, Anthony M.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 29pp., Cont.-in-part of

U.S. Ser. No. 77,977.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

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		NΖ,	OM,	PG,	PH,	PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,
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OTHER SOURCE(S): MARPAT 146:100917

GΙ

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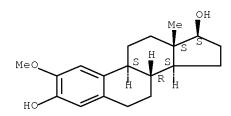
AB Methoxyestradiol analogs of formula I [R = OMe, OEt, C.tplbond.CMe; Z = CH(OH), CH(O-alkyl), dioxolane, etc.] are prepared for the treatment of diseases or conditions characterized by undesirable angiogenesis. Thus, II was prepared, and had IC50 value of 0.19 μ M against MDA-MB-231 cells.

IT 362-07-2, 2-Methoxyestradiol
RL: PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses) (preparation of methoxyestradiol analogs as antiangiogenic agents)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2006:1063108 CAPLUS Full-text

DOCUMENT NUMBER: 145:417029

TITLE: Methods for generating stably linked complexes

composed of homodimers, homotetramers or dimers of

dimers

INVENTOR(S): Chang, Chien Hsing; Goldenberg, David M.; McBride,

William J.; Rossi, Edmund A.

PATENT ASSIGNEE(S): IBC Pharmaceuticals, Inc., USA

SOURCE: PCT Int. Appl., 105 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

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The authors disclose dimerization and docking domain (DDD) sequences for the generation of stably tethered structures of defined compns., which may have multiple functionalities and/or binding specificities. The tethered constructs may be virtually any mol. or structure, such as antibodies, antibody fragments, antibody analogs or mimetics, aptamers, binding peptides, fragments of binding proteins, known ligands for proteins or other mols., enzymes, detectable labels or tags, therapeutic agents, toxins, pharmaceuticals, cytokines, interleukins, interferons, radioisotopes, proteins, peptides, peptide mimetics, polynucleotides, RNAi, oligosaccharides, natural or synthetic polymeric substances, nanoparticles, quantum dots, organic or inorg. compds., etc. In one example, a fusion construct of a DDD

sequence with an anti-CEA Fd fragment was prepared and shown to target colorectal cancer in a xenograft model.

IT 362-07-2DP, 2-Methoxyestradiol, conjugates

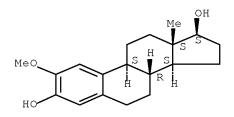
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(with dimerization and docking domain constructs)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 11 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2006:736387 CAPLUS Full-text

DOCUMENT NUMBER: 145:180945

TITLE: Lipocalin 2 in reversing epithelial to mesenchymal

transition and for treatment or prevention of cancer metastasis, angiogenesis, and

fibrosis

INVENTOR(S): Sukhatme, Vikas P.; Karumanchi, S. Ananth; Seth,

Pankaj; Hanai, Junichi; Mammoto, Tadanori;

Barasch, Jonathan; Mori, Kiyoshi

PATENT ASSIGNEE(S): Beth Israel Deaconess Medical Center, USA

SOURCE: PCT Int. Appl., 140 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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RO, RU,	SC, SD, SE	, SG, SK, SI	L, SM, SY, TJ, TM, C	IN, TR, TT,
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RW: AT, BE,	BG, CH, CY	, CZ, DE, Dk	K, EE, ES, FI, FR, G	GB, GR, HU,
IE, IS,	IT, LT, LU	, LV, MC, NI	L, PL, PT, RO, SE,	SI, SK, TR,
BF, BJ,	CF, CG, CI	, CM, GA, GN	I, GQ, GW, ML, MR, I	NE, SN, TD,
TG, BW,	GH, GM, KE	, LS, MW, MZ	Z, NA, SD, SL, SZ, S	IZ, UG, ZM,
ZW, AM,	AZ, BY, KG	, KZ, MD, RU	J, TJ, TM, AP, EA, I	EP, OA

PRIORITY APPLN. INFO.:

US 2005-645438P P 20050119

AB The invention invention shows lipocalin 2 in reversing epithelial to mesenchymal transition and for treatment or prevention of cancer metastasis, angiogenesis, and fibrosis. Lipocalin 2 suppresses cell invasiveness, blocks VEGF production and induces thrombospondin, thereby inhibiting many of the signaling pathways and processes that contribute to angiogenesis and metastasis.

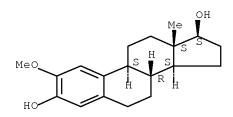
IT 362-07-2, 2-Methoxyestradiol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as angiogenesis inhibitor; lipocalin 2 in
reversing epithelial to mesenchymal transition and for treatment or
prevention of cancer metastasis, angiogenesis,
and fibrosis)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 12 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2006:515900 CAPLUS Full-text

DOCUMENT NUMBER: 145:1037

TITLE: Method and composition using agents increasing

intracellular accumulation of NADH + H+ for

enhancing anti-angiogenic therapy

INVENTOR(S):
Ben-Sasson, Shmuel A.

PATENT ASSIGNEE(S): Yissum Research Development Company of the Hebrew

University of Jerusalem, Israel

SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

P	PΑΊ	ENT I	. O			KIN	D	DATE			APPL	ICAT	ION 1	NO.		D	ATE
	_	2006				A2 A3		2006 2007	–	1	WO 2	005-	IB40	 69		2	0051005
		W:	•	•		•		AU,		•			•		•	•	•
			•	•	•	•	•	CZ, HR,	•	•	•	•	•	•	•	•	•
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				•	•	•	•	NG, SK,	•		•	•	•	•	•	•	•
			•	•	•	•	•	VN,	•	•	•						
		RW:	ΑT,	BΕ,	ВG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GΒ,	GR,	HU,

IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA AU 2005308539 20060601 AU 2005-308539 Α1 20051005 CA 2583315 Α1 20060601 CA 2005-2583315 20051005 EP 1812033 A2 20070801 EP 2005-850776 20051005 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU CN 2005-80034291 CN 101068561 20071107 20051005 Α US 2007-664957 US 20090010887 Α1 20090108 20070406 PRIORITY APPLN. INFO.: US 2004-616348P 20041006

WO 2005-IB4069 W 20051005

The invention relates to the discovery that agents that increase intracellular AΒ accumulation of NADH + H+ enhance the anticancer effects of &ngiogenesis inhibitors. Furthermore, treatment of a mammal with a combination of at least one angiogenesis inhibitor and at least one agent that enhances intracellular accumulation of NADH + H+ allows for the enhanced treatment and/or prevention of angiogenic diseases and disorders.

362-07-2, 2-Methoxyestradiol

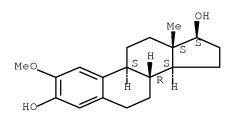
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(agents increasing intracellular accumulation of NADH and hydrogen ion for enhancing anti-angiogenic therapy)

362-07-2 CAPLUS RN

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2006:513382 CAPLUS Full-text

DOCUMENT NUMBER: 145:21719

A method of administering steroidal TITLE:

anti-angiogenic agents and a method of treating

disease using same

INVENTOR(S): Fogler, William E.; Sidor, Carolyn F.; Treston,

Anthony M.; Volker, Kirk M.

PATENT ASSIGNEE(S): Entremed, Inc., USA SOURCE: PCT Int. Appl., 60 pp.

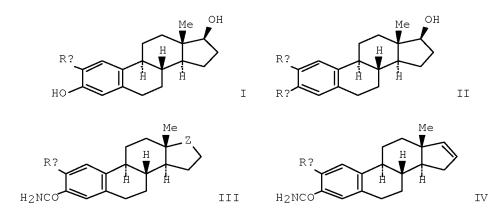
CODEN: PIXXD2

DOCUMENT TYPE: Patent English LANGUAGE:

FAMILY ACC. NUM. COUNT: 1

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WO	2006	0582	98		A3		2007	0104								
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		GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KM,
		KN,	KP,	KR,	KΖ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,
		MK,	MN,	MW,	MX,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,
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							LS,									
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										US 2	005-	7320	65P		P 2	0051101
									,	WO 2	005-	JS42	944	1	W 2	0051129

OTHER SOURCE(S): MARPAT 145:21719
GI



AB A method of administering an anti-angiogenic agent to a human or an animal comprising administering the anti-angiogenic agent such that a plasma concentration of the anti-angiogenic agent in the human or animal is substantially continuously maintained above 1 ng/mL. Antiangiogenic agents are those compds. that exhibit antiangiogenesis, antiinflammatory, antimitotic and/or antitumor activity in humans and animals. Most preferred compds. are

those of the general formulas I, II, III or IV: wherein Ra = OCH3, OCH2CH3, Me, Et, or CCCH3; and Rx = NH2, F, Cl, Br, CH=CH2, NH-CH0, -O-sulfamate; and Z = >C(H2), >C(H)-CH3, >C=CH2, >C=CHCH3 (cis or trans), >C=O, >C(H)-OH, >C(H)-O-alkyl or >C(H)-O-sulfamate. The compds. of the invention can be used to treat any disease characterized by abnormal cell mitosis and/or abnormal or undesirable angiogenesis.

IT 362-07-2 165619-07-8

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

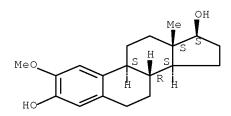
(method of administering steroidal anti-angiogenic agents

and a method of treating disease associated with neovascularization)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

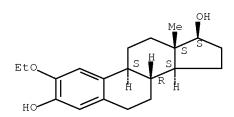
Absolute stereochemistry.



RN 165619-07-8 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-ethoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

DE EODMAT

RE FORMAT

L24 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2006:383669 CAPLUS Full-text

DOCUMENT NUMBER: 144:404430

TITLE: Use of Na+/K+-ATPase inhibitors and antagonists

thereof for the treatment of hypoxia-related and

other conditions

INVENTOR(S): Khodadoust, Mehran; Sharma, Ajay PATENT ASSIGNEE(S): Bionaut Pharmaceuticals, Inc., USA

SOURCE: PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

F	PAT	ENT I	.00			KIN	D	DATE			APPL	ICAT	ION I	NO.		D.	ATE
•		2006						2006 2007			WO 2	005-1	us37	486		2	0051018
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			CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,
			GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KM,
			KP,	KR,	KΖ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,
			MN,	MW,	MX,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,
			RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SY,	ΤJ,	TM,	TN,	TR,	TT,	TZ,
	UA, UG, U						VC,	VN,	YU,	ZA,	ZM,	ZW					
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			ΙE,	IS,	ΙΤ,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,
			BF,	ΒJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,
			ΤG,	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NΑ,	SD,	SL,	SZ,	TZ,	UG,	ZM,
			ZW,	ΑM,	ΑZ,	BY,	KG,	KZ,	MD,	RU,	ΤJ,	TM					
Ü	JS	2006	0135	443												_	0051018
E	EΡ	1812	010			A2		2007	0801		EP 2	005-	8122	16		2	0051018
		R:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,
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			TR,	AL,	BA,	HR,	MK,	YU									
PRIORI	DRITY APPLN. INFO.:										US 2	004-	6196.	37P		P 2	0041018
											WO 2	005-	US37	486	1	W 2	0051018

OTHER SOURCE(S): MARPAT 144:404430

The reagent, pharmaceutical formulation, kit, and methods of the invention provide a new approach for treating hypoxia-related pathol. conditions, e.g. Alzheimer's disease, and those involving excessive angiogenesis, especially those non-cancer pathol. conditions. The invention provides the use of Na+/K+-ATPase inhibitors, such as cardiac glycosides (e.g. ouabain and proscillaridin, etc.), either alone or in combination with other standard therapeutic agents for treating such conditions. The invention also relates to the use of cardiac glycoside inhibitors/antagonists as reagents, pharmaceutical formulations, or in kits and methods for treating conditions arising from excessive amount of cardiac glycosides, including all symptoms of digitalis poisoning, depression, hypertension, etc. The pharmaceutical formulation of the invention may be delivered to a patient either systemically or locally, or both. The pharmaceutical formulations of the invention may be delivered either in one dose, or continuously over a sustained period of time using e.g. sustained drug delivery devices.

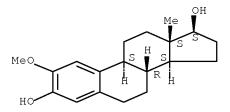
IT 362-07-2, 2-Methoxyestradiol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(sodium/potassium-ATPase inhibitors and antagonists thereof for treatment of hypoxia-related and other conditions)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 15 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2005:1314305 CAPLUS Full-text

DOCUMENT NUMBER: 144:45456

TITLE: Thalidomide derivatives as dual inhibitors

of cancer and angiogenesis

INVENTOR(S): Brown, Milton L.

PATENT ASSIGNEE(S): University of Virginia Patent Foundation, USA

SOURCE: PCT Int. Appl., 81 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PA:	TENT										LICAT				D _	ATE
WO	2005															0050601
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		GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL	, IN,	IS,	JP,	KE,	KG,	KM,
		KP,	KR,	KΖ,	LC,	LK,	LR,	LS,	LT,	LU	, LV,	MA,	MD,	MG,	MK,	MN,
		MW,	MX,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM	PG,	PH,	PL,	PT,	RO,	RU,
		SC,	SD,	SE,	SG,	SK,	SL,	SM,	SY,	ΤJ	, TM,	TN,	TR,	TT,	TZ,	UA,
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	RW:	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NA,	SD	, SL,	SZ,	TZ,	UG,	ZM,	ZW,
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	2007				A1		2007	0614								0061220
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										WO	2005-	US19	244		W 2	0050601
										US	2006-	6282	09		A2 2	0061201

GΙ

$$R1$$
 N
 $R2$
 $R3$
 $R4$

AΒ The invention is related to thalidomide derivs. of formula I [R1, R3, R4 = independently H, halo, NO2, Ph, etc.; X = NH and derivs., CH2, CO, etc.; Z = abond, O, NH, S, CO, etc.; R2 = H, halo, aryl, etc.] which inhibit cancer and angiogenesis, and disrupt microtubule polymerization The invention is also related to methods of treating cancers comprising mutant p53. Condensation of anthranilamide with benzaldehyde gave 2,3-dihydro-2-phenyl-4(1H)-quinazolinone (II). Quinazolinone II was a potent inhibitor of colon cancer proliferation with antiproliferative activities ranging from 68 nM to 4 μ M. II was a microtubule depolymg. agent and caused dramatic reorganization of interphase microtubule networks, similar to the effects of vinblastine. II, at 3 $\mu\text{M},$ caused the formation of abnormal mitotic spindles and mitotic accumulation. II was a poor substrate for transport by P-glycoprotein (Pgp); thus it was more effective against Pgp mediated multi-drug resistance. II inhibited the proliferation of human microvessel and umbilical vein endothelial cells (IC50 of 20 μM and 1.6 μM). II inhibited the growth of blood vessel in vivo in the chick chorioallantoic membrane model, demonstrating its antiangiogenic activity. Pharmaceutical compns. comprising I are claimed.

IT 362-07-2

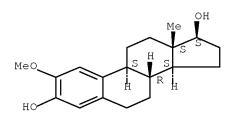
RL: PRPH (Prophetic)

(Thalidomide derivatives as dual inhibitors of cancer and angiogenesis)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 16 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2005:1259318 CAPLUS Full-text

DOCUMENT NUMBER: 144:583

TITLE: Methods and compositions using selective cytokine

inhibitory drugs for treatment and management of

cancers and other diseases

INVENTOR(S): Zeldis, Jerome B.

PATENT ASSIGNEE(S): Celgene Corporation, USA SOURCE: PCT Int. Appl., 89 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA:	TENT	NO.			KIN:	D _	DATE		,	APP:	LICAT:	ION :	NO.		D.	ATE
WO	2005	1129	18		A1		2005	1201		WO :	2004-	JS14	002		2	0040505
	W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	AZ,	BA,	BB	, BG,	BR,	BW,	BY,	BZ,	CA,
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		MX,	MZ,	NA,	NI,	NO,	NΖ,	OM,	PG,	PH	, PL,	PT,	RO,	RU,	SC,	SD,
		SE,	SG,	SK,	SL,	SY,	ТJ,	TM,	TN,	TR	, TT,	TZ,	UA,	UG,	US,	UZ,
		VC,	VN,	YU,	ZA,	ZM,	ZW									
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		DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU	, IE,	ΙT,	LU,	MC,	NL,	PL,
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AU	2004	3198	15		A1		2005	1201		AU :	2004-3	3198	15		2	0040505
	2565						2005	1201		CA :	2004-2	2565	446		2	0040505
EP	1750	697			A1		2007	0214		EP :	2004-	7513	98		2	0040505
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		LT,	LV,	MK												
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	2007				_		2007				2007-					0040505
	2006						2007	•			2006-I					0061103
	2007	-			А		2007				2006-					0061204
	2008				A1		2008	1030			2008-				_	0080612
ORIT:	Y APP	LN.	INFO	.:						WO:	2004-t	JS14	002		A 2	0040505

OTHER SOURCE(S): MARPAT 144:583

- AB Methods of treating, preventing and/or managing cancer as well as and diseases and disorders associated with, or characterized by, undesired angiogenesis are disclosed. Specific methods encompass the administration of a selective cytokine inhibitory drug alone or in combination with a second active ingredient. The invention further relates to methods of reducing or avoiding adverse side effects associated with chemotherapy, radiation therapy, hormonal therapy, biol. therapy or immunotherapy which comprise the administration of a selective cytokine inhibitory drug. Pharmaceutical compns., single unit dosage forms, and kits suitable for use in methods of the invention are also disclosed.
- IT 362-07-2, 2-Methoxyestradiol

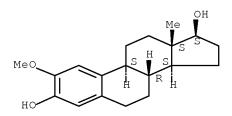
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cytokine inhibitors for treatment and management of cancers and other diseases)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1176484 CAPLUS Full-text

DOCUMENT NUMBER: 143:446745

TITLE: Estradiol derivative and estratopone containing

sustained release intraocular implants

INVENTOR(S): Shiah, Jane Guo; Dickinson, Paul W.

PATENT ASSIGNEE(S): Allergan, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

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	2005						2005	1124		AU 2	005-	2442	16		2	0050421
CA	2564	948			A1		2005	1124		CA 2	005-	2564	948		2	0050421
WO	2005	1103	66		A1		2005	1124		WO 2	005-	US14.	257		2	0050421
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JP	2007	5353	67		Τ		2007	1206		JP 2	007-	5108	84		2	0050421
PRIORIT	Y APP	LN.	INFO	.:						US 2	004-	8373	79		A 2	0040430

WO 2005-US14257 W 20050421

OTHER SOURCE(S): MARPAT 143:446745

Biocompatible intraocular implants include an anti-angiogenic agent, such as estradiol derivative or an estratopone and a biodegradable polymer that is effective to facilitate release of the anti-angiogenic agent into an eye for an extended period of time. The therapeutic agents of the implants may be associated with a biodegradable polymer matrix such as glycolide-lactide copolymer, such as a matrix that is substantially free of a polyvinyl alc. The implants may be placed in an eye to treat or reduce the occurrence of one or more ocular conditions, such as angiogenesis, ocular tumors, and the like.

IT 362-07-2, 2-Methoxyestradiol

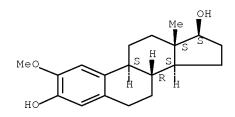
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(estradiol derivative and estratopone containing sustained release intraocular implants)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 18 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1005974 CAPLUS Full-text

DOCUMENT NUMBER: 143:306455

TITLE: Use of estrane-3-carboxamides as antiangiogenic

agents

INVENTOR(S): Agoston, Gregory E.; Shah, Jamshed H.; Suwandi,

Lita; LaVallee, Theresa M.; Treston, Anthony

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 29 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050203075	A1	20050915	US 2005-77977	20050311
AU 2005222934	A1	20050929	AU 2005-222934	20050311
CA 2558014	A1	20050929	CA 2005-2558014	20050311
WO 2005089256	A2	20050929	WO 2005-US8384	20050311
WO 2005089256	A3	20051222		
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GB, GD,	GE, GH, GM,	HR, HU, ID), IL, IN, IS, JP, KE	, KG, KP,
KR, KZ,	LC, LK, LR,	LS, LT, LU	J, LV, MA, MD, MG, MK	, MN, MW,

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PRIORITY APPLN. INFO.:
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                                            US 2005-77977
                                                                A2 20050311
                                            WO 2005-US8384
                                                                W 20050311
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OTHER SOURCE(S): CASREACT 143:306455; MARPAT 143:306455

Compns. and methods for treating mammalian diseases or conditions characterized by undesirable angiogenesis by administering an effective amount of a compds. I [Ra = OCH3, OCH2CH3 or CCCH3; Z = :CHOH, :CH-O-alkyl, :C(H)-O-sulfamate; alkyl = linear, branched and/or cyclic hydrocarbon chain comprising 1 to 10 carbons] or 2-methoxy-1,3,5(10),16-estratetraene-3-carboxamide (II; Ra = OMe). Thus, II was prepared from 2-methoxyestradiol via oxidation to 2-methoxyestrone, hydrazonation with tosylhydrazine followed by Shapiro reaction to 2-methoxy-1,3,5(10),16-estratetraene-3-ol, triflation, and aminocarbonylation with CO/HN(SiMe3)3 in DMF containing catalytic PdCl2/dppp. The antiangiogenic and antitumor activity of II (Ra = OMe) was determined [IC50 = 0.19 µM vs. MDA-MB-231 cell line; IC50 = 0.23 µM vs. U87-MG cell line; IC50 = 0.21 µM vs. PC3 cell line; IC50 = 0.13 µM vs. HUVEC cell line].

IT 362-07-2, 2-Methoxyestradiol 165619-07-8, 2-Ethoxyestradiol

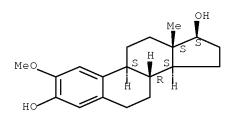
RL: PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic

use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses) (triflation or oxidation of; preparation of estrane-3-carboxamides for use as antiangiogenic agents)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

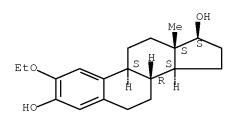
Absolute stereochemistry.



RN 165619-07-8 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-ethoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L24 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:547715 CAPLUS <u>Full-text</u>

DOCUMENT NUMBER: 143:73655

TITLE: Development of HIF (hypoxia-inducible

factor)-binding oligonucleotide aptamer decoy and its use in therapy of HIF-associated diseases

INVENTOR(S): Mcevoy, Leslie M.; Powell, Lyn; Zhang, Jie;

Morris, Karen

PATENT ASSIGNEE(S): Corgentech, Inc., USA SOURCE: PCT Int. Appl., 107 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

Ι	PAI	ENT	NO.			KIN:	D	DATE		-	APPL	ICAT	ION 1	NO.		D.	ATE
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     US 20050215503
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PRIORITY APPLN. INFO.:
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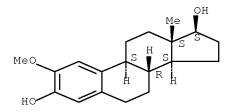
The invention concernes double-stranded HIF (hypoxia-inducible factor) decoy AΒ oligodeoxynucleotide (dsODN) aptamer mols. containing a core (ACCTG) and flanking sequences (FLANK1-CORE-FLANK2, 14 .apprx. 28 nt) that is capable of specific binding to the HIF transcription factor. One of the sense and the antisense strands in the aptamer dsODN has a modified backbone with phosphodiester, phosphodithionate and/or phosphoamidate. The restrictions regarding the positions of the specific nucleotide bases in the 3'- and 5'flanks of the aptamer dsODN have been claimed. The invention also includes their use in the treatment of various diseases and pathol. conditions such as hypoxia, inflammation and cancers that are associated with the regulation of gene transcription by a HIF transcription factor. The gene expressing the sequence of the aptamer dsODN is designed to be introduced into the nucleus of the target cells using liposomes with viral coat protein under pressure and the dsODN is capable of episomal replication in the cells. The therapeutic method using dsODN can be used with the addnl. anti-angiogenic agents including anti-EGF agents, anti-VEGF agents, matrix metalloproteinase inhibitor, vascular targeting agents and integrin antagonists. The aptamer binding to the ${\rm HIF}-1\alpha/{\rm HIF}-1\beta$ complex, competition in binding to the target gene promoter, reduction of tumor growth and promotion of apoptosis in the target cells were exptl. demonstrated.

IT 362-07-2, Panzem

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (aptamer oligodeoxynucleotide co-use with; development of HIF (hypoxia-inducible factor)-binding oligonucleotide aptamer decoy and its use in therapy of HIF-associated diseases)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 20 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2005:303191 CAPLUS Full-text

DOCUMENT NUMBER: 142:341966

TITLE: Hydrogels used to deliver medicaments to the

eye for the treatment of posterior segment

diseases

INVENTOR(S): Schultz, Clyde L.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 7 pp., Cont.-in-part of

U.S. Ser. No. 821,718.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

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M	Ю	2005	1104	73		A2		2005	1124		WO	2005-	US12	185		2	0050409
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C	N	19463	352			Α		2007	0411		CN	2005-	8001	2215		2	0050409
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PRIORI	TY	APP	LN.	INFO	. :						US	2003-	4613	54P		P 2	0030409
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US 2004-971997 A2 20041022

US 2005-102454 A2 20050409

WO 2005-US12185 W 20050409

This invention provides a polymeric drug delivery system including a hydrogel containing one or more drugs for the treatment of a posterior segment disease. Exemplary drugs are anti- angiogenesis compds. for the treatment of macular degeneration. Allowing passive transference of this drug from a dilute solution into the hydrogel produces the delivery system. The hydrogel, when placed in contact with the eye, delivers the drug. The delivery of the drug is

sustained over an extended period of time, which is of particular utility in the eye, which is periodically flushed with tears. This sustained delivery accelerates the treatment process while avoiding potential damaging effects of localized delivery of high concns. of compds., e.g., from eye drops.

IT 362-07-2, 2-Methoxyestradiol

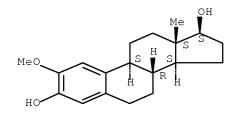
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydrogels containing drugs for treatment of <code>@y@</code> diseases in posterior segment)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:59971 CAPLUS Full-text

DOCUMENT NUMBER: 142:134782

TITLE: Preparation of 2-methoxyestradiol analogs as

antiangiogenic agents

INVENTOR(S): Agoston, Gregory E.; Lavallee, Theresa M.;

Pribluda, Victor S.; Shah, Jamshed H.; Treston,

Anthony M.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 97 pp.

CODEN: USXXCO

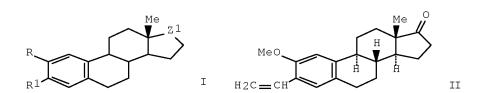
DOCUMENT TYPE: Patent LANGUAGE: English

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                                                                 A1 20060522
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OTHER SOURCE(S): MARPAT 142:134782



AB Estranes of formula I [R = OMe, OEt, C.tplbond.CMe; R1 = F, NH2, CONH2, NHCHO, OSO2NH2; Z1 = CH2, CHMe, C=CH2, CO, C=CHMe] are prepared for the treatment of mammalian disease characterized by undesirable angiogenesis. Thus, II was prepared from tributylvinyltin and 2-methoxy-3-trifluoromethanesulfonylestra-1,3,5(10)-trien-17-one. II had IC50 of 0.58 μM against HUVEC cells.

II 165619-07-8

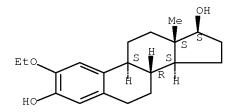
RL: PAC (Pharmacological activity); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)

(preparation of methoxyestradiol analogs as antiangiogenic agents)

RN 165619-07-8 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-ethoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 499 THERE ARE 499 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2004:1033549 CAPLUS Full-text

DOCUMENT NUMBER: 142:758

TITLE: Methods and compositions using immunomodulatory

compounds for treatment and management of cancers

and other angiogenesis-associated diseases

INVENTOR(S): Zeldis, Jerome B.

PATENT ASSIGNEE(S): Celgene Corporation, USA SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

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Z, EE, HU, SK
20031106
20031106
20031106

CA	2004 2525 1635 R:	557 826 AT, PT,	BE, IE,	CH,	A1 A2 DE,	2 2 DK,	20041 20060 ES,	1202 0322 FR,	CA EP GB, GI	2004- 2004- R, IT,	2525 7514 LI,	557 00 LU,	NL,	SE	20040505 20040505 20040505 E, MC,
CN JP MX MX IN AU AU US US	2004 1822 2006 2005 2006 2006 2008 2008 2008 2008 APP	PL, 0103 834 5289 PA04 PA12 CN03 2023 2023 0132 0138 2013	SK, 06 73 734 155 418 16 16 541 295 43	HR	A A T	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2006(2006(2006(2005(2006(2006(2008(2008(RO, 0523 0823 1228 0802 0222 0727 0622 0410 0605 0612	BR CN JP MX MX IN AU US US AU US AU US WO	2004- 2004- 2006- 2005- 2005- 2006- 2007- 2008- 2008-	1030 8002 5327 PA47 PA12 CN34 2023 5573 6947 2013 4382 7042 3808 4246 2346 US35	6 0445 87 34 155 18 16 02 3 43 13 37 42P 00P 26 544		A A P P A3	20040505 20040505 20040505 20050503 20051111 20051215 20060531 20070906 20080211 20080320 20030515 20031106 20020517
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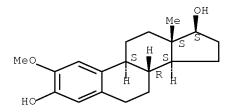
OTHER SOURCE(S): MARPAT 142:758

- AB Methods are disclosed for treating, preventing and/or managing cancer, as well as and diseases and disorders associated with, or characterized by, undesired angiogenesis. Specific methods encompass the administration of an immunomodulatory compound alone or in combination with a second active ingredient. The invention further discloses methods for reducing or avoiding adverse side effects associated with chemotherapy, radiation therapy, hormonal therapy, biol. therapy or immunotherapy, which comprise the administration of an immunomodulatory compound Pharmaceutical compns., single unit dosage forms, and kits suitable for use in methods of the invention are also disclosed.
- IT 362-07-2, 2-Methoxyestradiol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(immunomodulatory compds. for treatment of cancers and other angiogenesis—associated diseases) $\begin{tabular}{ll} \hline \end{tabular}$

- RN 362-07-2 CAPLUS
- CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2004:905611 CAPLUS Full-text

DOCUMENT NUMBER: 141:361102

TITLE: Compounds and methods for the use of estrogens as

anti-mitotic agents to inhibit

neovascularization in eye

diseases

INVENTOR(S): D'Amato, Robert J.; Folkman, M. Judah

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of

U.S. Ser. No. 77,142.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
	A1 A A1 B1	20041028 19960402 20060329 20081015	US 1993-102767	20040227 19930806 19940802		
· · · · ·	•	ES, FR,	GB, GR, IT, LI, LU, NL,	SE, MC,		
PT, IE, SI,		200000004	HD 2000 2015	19940802		
EP 1927359 EP 1927359	AZ A3		EP 2008-2915	19940002		
			GB, GR, IE, IT, LI, LU,	MC NI.		
PT, SE	DE, DI	., ED, EN,	05, 011, 11, 11, 10,	HC, NII,		
US 5661143	А	19970826	US 1995-571265	19951212		
US 5892069	А	19990406	US 1997-838699	19970425		
US 6528676	В1	20030304	US 1999-243158	19990202		
US 20030236408	A1	20031225	US 2001-780650	20010212		
US 7109187	B2	20060919				
US 20020165212	A1	20021107	US 2002-77142	20020215		
US 6908910	В2	20050621				
US 20020119959	A1	20020829	US 2002-80076	20020221		
US 6723858	В2	20040420				
US 20030055029	A1	20030320	US 2002-255652	20020925		
US 20030096800	A1	20030522	US 2002-280831	20021025		
US 7012070	В2	20060314				
US 20030195180	A1	20031016	US 2003-379991	20030303		
US 20040072813	A1	20040415	US 2003-617150	20030710		
US 6930128	B2	20050816	HG 0004 010607	00040010		
US 20050020555	A1	20050127	US 2004-918627	20040812		

		10//09	4/1			
US 7081477 US 20060079576 US 7381848	B2 A1 B2	20060725 20060413 20080603	US	2005-230375		20050519
US 20060183727 US 7291610	A1 B2	20060817 20071106	US	2006-402386		20060412
JP 2008120839 JP 2008120840 PRIORITY APPLN. INFO.:	A A	20080529 20080529	JP	2008-41709 2008-41711 1993-102767	A1	20080222 20080222 19930806
			US	1995-571265	А3	19951212
			US	1997-838699	А3	19970425
			US	1999-243158	A1	19990202
			US	2002-77142	A2	20020215
			EP	1994-924120	А3	19940802
			EP	2005-16659	А3	19940802
			JP	1995-506502	A3	19940802
			US	1998-19975	В1	19980206
			US	1999-253206	В1	19990219
			US	1999-436610	В1	19991109
			US	2000-580897	A1	20000530
			US	2000-580089	A1	20000607
			US	2001-780650	A1	20010212
			US	2002-80076	A1	20020221
			US	2003-617150	A1	20030710
			US	2004-918627	A1	20040812

GI

AB A method of inhibiting neovascularization in a mammal comprises administering to the mammal a neovascularization-inhibiting amount of an estrogenic compound of the formula (I):.

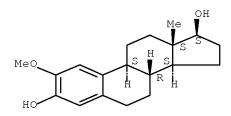
IT 362-07-2, 2-Methoxyestradiol
RL: BSU (Biological study, unclassified); PAC (Pharmacological

activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (compds. and methods for use of estrogens as anti-mitotic agents to inhibit neovascularization in eye diseases)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



 $\ensuremath{\text{L}24}$ ANSWER 24 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:270085 CAPLUS Full-text

DOCUMENT NUMBER: 140:297513

TITLE: Method using immunophilin-binding compounds for

inhibiting choroidal

neovascularization, animal model, and

screening method

INVENTOR(S): Laties, Alan; Wen, Rong; Lou, Zhijun

PATENT ASSIGNEE(S): Trustees of the University of Pennsylvania, USA

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND DATE	APPLICATION NO.	DATE				
WO 2004027027 WO 2004027027	A2 20040401	WO 2003-US29188	20030918				
W: AE, AG, AL,	AM, AT, AU, AZ,	BA, BB, BG, BR, BY, BZ,	CA, CH,				
		DM, DZ, EC, EE, EG, ES,					
GD, GE, GH,	GM, HR, HU, ID,	IL, IN, IS, JP, KE, KG,	KP, KR,				
KZ, LC, LK,	LR, LS, LT, LU,	LV, MA, MD, MG, MK, MN,	MW, MX,				
MZ, NI, NO,	NZ, OM, PG, PH,	PL, PT, RO, RU, SC, SD,	SE, SG,				
SK, SL, SY,	TJ, TM, TN, TR,	TT, TZ, UA, UG, UZ, VC,	VN, YU,				
ZA, ZM, ZW							
RW: GH, GM, KE,	LS, MW, MZ, SD,	SL, SZ, TZ, UG, ZM, ZW,	AM, AZ,				
BY, KG, KZ,	MD, RU, TJ, TM,	AT, BE, BG, CH, CY, CZ,	DE, DK,				
EE, ES, FI,	FR, GB, GR, HU,	IE, IT, LU, MC, NL, PT,	RO, SE,				
SI, SK, TR,	BF, BJ, CF, CG,	CI, CM, GA, GN, GQ, GW,	ML, MR,				
NE, SN, TD,	TG						
CA 2498191	A1 20040401	CA 2003-2498191	20030918				
AU 2003272471	A1 20040408	AU 2003-272471	20030918				
EP 1539157	A2 20050615	EP 2003-754653	20030918				
R: AT, BE, CH,	DE, DK, ES, FR,	GB, GR, IT, LI, LU, NL,	SE, MC,				
PT, IE, SI,	LT, LV, FI, RO,	MK, CY, AL, TR, BG, CZ,	EE, HU, SK				
US 20050187241	A1 20050825	US 2003-665203	· · · · · · · · · · · · · · · · · · ·				

JP 2006511475 T 20060406 JP 2004-537893 20030918 PRIORITY APPLN. INFO.: US 2002-412088P P 20020918

WO 2003-US29188 W 20030918

AB The invention discloses compns. and methods for inhibiting unwanted angiogenesis, particularly those of ocular tissues. The treatment, inhibition, and/or prevention of choroidal neovasculature (CNV) is provided, along with an animal model for CNV and imaging techniques that permit the screening of potential agents as anti-angiogenesis and anti-CNV agents. The methodol. of the invention uses immunophilin-binding compds., e.g. rapamycin.

IT 362-07-2, 2-Methoxyestradiol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

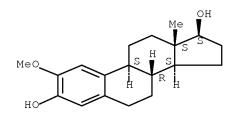
(Biological study); USES (Uses)

(immunophilin-binding compds. for inhibiting choroidal neovascularization, animal model, screening method, and use with other agents)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 25 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2003:532550 CAPLUS Full-text

DOCUMENT NUMBER: 139:95434

TITLE: Chorioallantoic membrane (CAM) assay for

identifying agents with biological effects

INVENTOR(S):
Hazel, Susan Jane

PATENT ASSIGNEE(S): Medvet Science Pty. Ltd., Australia

SOURCE: PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT	NO.			KIN	D	DATE		APPLICATION NO.					DATE		
					_									_	
WO 2003055530 A1 20030710						1	WO 2	002-	AU17	59		2	0021220		
W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,
	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,
	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KΖ,
	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,
	NO,	NΖ,	OM,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	ТЈ,

TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2002351885 Α1 20030715 AU 2002-351885 20021220 PRIORITY APPLN. INFO.: US 2001-343345P 20011221 AU 2002-950565 20020802 Α AU 2002-952008 20021011 WO 2002-AU1759 20021220 TAT

AΒ The invention discloses assays and, particularly, chorioallantoic membrane (CAM) assays for identifying and/or assessing agents with biol. effects (e.g. agents which effect angiogenesis, or promote neurogenesis, or which are capable of silencing particular gene(s)), and for assessing toxicity of various agents (e.g. for toxicity testing of candidate agents with desirable biol. effects). The CAM assay comprises (i) sep. placing 2-4 day old embryos from chicken or the like, which have been removed from their shells, into sep. cup means to support the embryos through steps (ii)-(vii), wherein each cup means also contains a suitable amount of a growth medium; (ii) incubating the embryos for about 24 h; (iii) measuring the size of the CAM developed from each embryo, and grouping the embryos having CAMs of substantially similar size; (iv) applying to one or more embryo(s) within a selected group, a candidate agent, wherein the candidate agent is applied to the/each embryo by absorbing the candidate agent onto a porous or otherwise sorbent support and placing the support into contact with the CAM such that at least a portion of the candidate agent thereafter diffuses from the support to the CAM; (v) incubating the embryo(s) of step (iv) and a control embryo(s) from the same selected group for about 18-24 h; (vi) administering to the CAM of each embryo of step (v) a contrasting composition comprising skim milk or the like and a suitably colored dyestuff; and (vii) determining whether the candidate agent affects the CAM and/or embryo by observing differences between the CAM(s) and/or embryo(s) to which the candidate agent was applied and the CAM(s) and/or embryo(s) of the control embryo(s) of the same selected group.

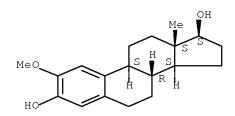
IT 362-07-2, 2-Methoxyestradiol

RL: PAC (Pharmacological activity); BIOL (Biological study) (chorioallantoic membrane assay for identifying agents with biol. effects)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 26 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2002:964373 CAPLUS <u>Full-text</u>

DOCUMENT NUMBER: 138:24877

TITLE: Preparation of novel 2-alkoxyestradiol analogs

with antiproliferative and antimitotic activity

INVENTOR(S): Rao, Pemmaraju Narasimha; Mooberry, Susan L.;

Cessac, James W.; Tinley, Tina L.

PATENT ASSIGNEE(S): Southwest Foundation for Biomedical Research, USA

SOURCE: PCT Int. Appl., 86 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA:	PATENT NO.					KIND DATE			APPLICATION NO.						DATE		
WO	2002	1008	77		A1	_	2002	1219		WO	 2002-	 US18	 867		2	20020611	
	W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	AZ,	BA,	BB	, BG,	BR,	BY,	BZ,	CA,	CH,	
		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DΖ	, EC,	EE,	ES,	FI,	GB,	GD,	
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS	, JP,	KE,	KG,	KP,	KR,	KZ,	
		LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD	, MG,	MK,	MN,	MW,	MX,	MZ,	
		NO,	NZ,	OM,	PH,	PL,	PT,	RO,	RU,	SD	, SE,	SG,	SI,	SK,	SL,	TJ,	
		TM,	TN,	TR,	TT,	TΖ,	UA,	UG,	UΖ,	VN	, YU,	ZA,	ZM,	ZW			
	RW:	GH,	GM,	KE,	LS,	MW,	${ m MZ}$,	SD,	SL,	SZ	, TZ,	UG,	ZM,	ZW,	ΑT,	BE,	
		CH,	CY,	DE,	DK,	ES,	FΙ,	FR,	GB,	GR	, IE,	ΙΤ,	LU,	MC,	ΝL,	PT,	
		SE,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ	, GN,	GQ,	GW,	ML,	MR,	NE,	
		,	TD,														
	2002				A1						2002-					20020611	
	2003						2003			US	2002-	1672	08		2	20020611	
	6593						2003										
	2003						2003			US	2003-	4120	07		2	20030411	
	6852				В2		2005	0208									
PRIORIT	Y APP:	LN.	INFO	.:						US	2001-	2974	28P		P 2	0010611	
											0000	4650	^ ^				
										US	2002-	1672	08		A3 2	20020611	
										WO	2002-	US18	867		W 2	20020611	

OTHER SOURCE(S): MARPAT 138:24877

GΙ

$$R^{4}$$
 R^{5}
 R^{6}
 R^{6}
 R^{20}
 R^{3}
 I
 H^{0}
 H^{0}

AB Novel 2-alkoxyestradiol analogs of formula I [R1 = alkyl, haloalkyl; R2 = H, SO2NHR; R = H, alkyl, acyl; R3 = H, alkyl, haloalkyl; R4 = H, alkyl, alkenyl, alkynyl, aryl, heteroaryl; R5 = alkyl; R6 = O, NOR, OSO2NHR] are prepared

which inhibit undesired cell proliferation and tumor growth. Addnl., methods are disclosed of treating diseases associated with undesired angiogenesis and undesired proliferation, and methods of treating infectious disease wherein the infectious agent is particularly susceptible to inhibition by agents that disrupt microtubule organization and function. Thus, II was prepared from estradiol in several steps. II was 6-24 times more potent than 2-methoxyestradiol in 5 human tumor cell lines.

IT 362-07-2P

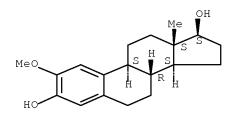
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of alkoxyestradiol analogs with antiproliferative and antimitotic activity)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 27 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2002:736045 CAPLUS Full-text

DOCUMENT NUMBER: 137:253004

TITLE: Ocular drug delivery devices

INVENTOR(S): Robinson, Michael R.; Csaky, Karl G.; Nussenblatt,

Robert B.; Smith, Janine A.; Yuan, Peng; Sung, Cynthia; Fronheiser, Matthew P.; Kim, Hyun C.

PATENT ASSIGNEE(S): United States Dept. of Health and Human Services,

USA

SOURCE: PCT Int. Appl., 89 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT	NO.	O. KIND DATE APPLICATION NO.						D	DATE						
					_										
WO 2002	0741	96		A1		2002	0926	,	WO 2	002-	US78	36		2	0020314
W:	ΑE,	AG,	AL,	ΑM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,
	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,
	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KP,	KR,	KΖ,
	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,
	NO,	NZ,	OM,	PH,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	TJ,
	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VN,	YU,	ZA,	ZM,	ZW	
RW:	GH,	GM,	ΚE,	LS,	MW,	MΖ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑT,	BE,

CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG US 20030175324 Α1 20030918 US 2001-808149 20010315 US 6713081 В2 20040330 AU 2002254225 Α1 20021003 AU 2002-254225 20020314 EP 1377232 Α1 20040107 EP 2002-723446 20020314 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR 20040916 US 20040180075 Α1 US 2004-471468 US 20070190111 20070816 US 2007-739540 Α1 20070424 PRIORITY APPLN. INFO.: US 2001-808149 A2 20010315 WO 2002-US7836 W 20020314 US 2004-471468 A1 20040503

Ocular implant devices for the delivery of a drug to an eye in a controlled and sustained manner are disclosed. Dual mode and single mode drug delivery devices are illustrated and described. Implants suitable for subconjunctival placement are described. Implants suitable for intravitreal placement also are described. The invention also includes fabrication and implementation techniques associated with the unique ocular implant devices that are presented. Thus, single mode matrix implant subconjunctival implant (based on PVA) can deliver potentially therapeutic levels of CsA to the eye for approx. a month. The dual mode matrix implant subconjunctival implant could deliver an initial loading dose of CsA lasting 1 mo followed by a steady state sustained-release delivery of CsA as a maintenance dose for at least 1 yr.

IT 362-07-2, 2-Methoxyestradiol

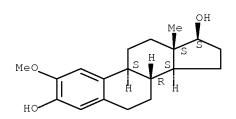
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ocular drug delivery devices)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 28 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2002:466707 CAPLUS $\underline{\text{Full-text}}$

DOCUMENT NUMBER: 137:37683

TITLE: Method of potentiating the action of

2-methoxyoestradiol, statins and c-peptide of

proinsulin

INVENTOR(S): Das, Undurti Narasimha

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020077317	A1	20020620	US 2000-737671	20001215
PRIORITY APPLN. INFO.:			US 2000-737671	20001215

Disclosed is a method of stabilizing and potentiating the actions of 2-AΒ methoxyoestradiol, statins, H2 blockers, and C-peptide of proinsulin which have modifying influence on angiogenesis and inhibiting the growth of tumor cells, peptic ulcer disease, diabetes mellitus and its complications, and Alzheimer's disease as applicable by using in coupling conjugation certain polyunsatd. fatty acids (PUFAs) chosen from linoleic acid, γ-linolenic acid, dihomo- γ -linolenic acid, arachidonic acid, α -linolenic acid, eicosapentaenoic acid, docosahexaenoic acid, cis-parinaric acid or conjugated linoleic acid in predetd. quantities. Uncontrolled angiogenic activity and tumor growth can be inhibited by the selective use of a mixture of PUFAs with anti-angiogenic substances used selectively, and optionally in conjunction with predetd. anticancer drugs. A preferred method of administration of the mixture to treat a tumor is intra-arterial administration into an artery which provides the main blood supply for the tumor. The method will also be useful in the treatment of peptic ulcer disease, diabetes mellitus and its complications and Alzheimer's disease.

IT 362-07-2

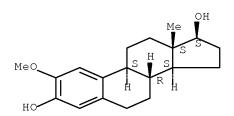
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(polyunsatd. fatty acids for potentiating actions of anigogenesis inhibitors and antiulcer agents and antidiabetics and mental disease drugs)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2002:405192 CAPLUS Full-text

DOCUMENT NUMBER: 138:158642

TITLE: Safety and Pharmacokinetics of Intravitreal

2-Methoxyestradiol Implants in Normal Rabbit and

Pharmacodynamics in a Rat Model of Choroidal

Neovascularization

AUTHOR(S): Robinson, M. R.; Baffi, J.; Yuan, P.; Sung, C.;

Byrnes, G.; Cox, T. A.; Csaky, K. G.

CORPORATE SOURCE: National Eye Institute, NIH1, NIH3, Bethesda, MD,

20892-1863, USA

SOURCE: Experimental Eye Research (2002), 74(2), 309-317

CODEN: EXERA6; ISSN: 0014-4835

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal LANGUAGE: English

Choroidal neovascularization (CNV) is the leading cause of severe vision loss AΒ associated with age-related macular degeneration. As the pathogenesis of CNV formation is better understood, mechanism-based therapies, including the use of antiangingenesis inhibitors, have been investigated. 2-Methoxyestradiol (2ME2), an endogenous metabolite of estradiol, has been shown in the chick allantoic membrane model and the corneal micropocket assay to have antiangiogenic properties. The authors sought to determine the safety and pharmacokinetics of sustained-release intravitreal 2ME2 implants in normal rabbit and their efficacy in a rat model of CNV. 2ME2 implants were constructed using two designs: implant A, a silicone-based reservoir implant for the rabbit eye, and implant B, a microimplant matrix design for the rat eye. In vitro release rates of both implants were determined New Zealand white (NZW) rabbits had implant A placed in the vitreous cavity of one eye and the ocular toxicity was evaluated by clin. examination, serial electroretinoq. (ERG), and histopathol. over a 28 wk period. The steady state clearance of 2ME2 in the rabbit eye was calculated from in vivo release rates divided by steady state vitreous concns. A CNV model in the Brown-Norway rat was performed by injecting an adenoviral vector encoding human vascular endothelial growth factor in the subretinal space. Following the injection, a 2ME2 or sham (no drug) microimplant was placed in the vitreous cavity. Animals were killed over a 3 wk period and the eves examined for CNV by histopathol. Results showed that following a short burst, the release rate of implant A followed zero-order kinetics, typical of reservoir devices, and the cumulative release of implant B was proportional to the square root of time, as expected for a matrix delivery device. The safety studies in normal rabbit showed no ocular toxicities by clin. examination, ERG, and histopathol. Pharmacokinetic evaluation in the rabbit showed mean 2ME2 vitreous levels within the therapeutic range for the inhibition of endothelial cell proliferation. The exptl. rat model showed a significant reduction in CNV in eyes treated with the 2ME2 implant. In conclusion, sustained-release 2ME2 intravitreal implants, which can be designed to deliver potentially therapeutic vitreous levels of 2ME2 for an extended period of time, appeared to be safe in normal rabbit and effective in a rat model of CNV. Sustainedrelease 2ME2 intravitreal implants may hold promise in the treatment of recurrent CNV refractory to standard therapy.

IT 362-07-2, 2-Methoxyestradiol

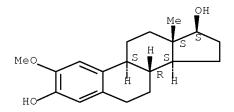
RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PKT (Pharmacokinetics); PRP (Properties); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(intravitreal methoxyestradiol implants for treatment of choroidal neovascularization)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2002:185320 CAPLUS Full-text

DOCUMENT NUMBER: 136:242932

TITLE: Identification of peptide ligands for specific

cell types by phage display for use in drug targeting and control of biological processes

INVENTOR(S): Arap, Wadih; Pasqualini, Renata

PATENT ASSIGNEE(S): Board of Regents, the University of Texas System,

USA

SOURCE: PCT Int. Appl., 311 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PA:	FENT	NO.			KINI	D	DATE		APPLICATION NO.				NO.	DATE		
WO	2002	0207	69		A1	_	2002	0314	,	WO 2	001-	US27	692		2	0010907
WO	2002	0207	69		A9		2003	0904								
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AU	2001	0888	43		Α		2002	0322		AU 2	001-	8884	3		2	0010907
EP	1322	755			A1		2003	0702		EP 2	001-	9686	03		2	0010907
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CA	2458	047			A1		2003	0320	1	CA 2	002-	2458	047		2	0020830
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WO	2003	0229	91		А3		2004	1028								
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PRIORITY APPLN. INFO.:
                                         US 2000-231266P
                                                            P 20000908
                                         US 2001-765101
                                                            A 20010117
                                                           A3 20010907
                                         AU 2001-288843
                                         AU 2001-288914 A3 20010907
                                         AU 2001-290662
                                                            A3 20010907
                                         AU 2001-88843
                                                            T0 20010907
                                         AU 2001-88914
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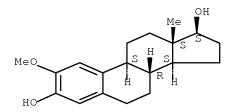
The present invention concerns methods and compns. for in vivo and in vitro targeting. A large number of targeting peptides directed towards human organs, tissues or cell types are disclosed. The peptides are of use for targeted delivery of therapeutic agents, including but not limited to gene therapy vectors. A novel class of gene therapy vectors is disclosed. Certain of the disclosed peptides have therapeutic use for inhibiting angiogenesis, inhibiting tumor growth, inducing apoptosis, inhibiting pregnancy or inducing weight loss. Methods of identifying novel targeting peptides in humans, as well as identifying endogenous receptor-ligand pairs are disclosed. Methods of identifying novel infectious agents that are causal for human disease states are also disclosed. A novel mechanism for inducing apoptosis is further disclosed.

IT 362-07-2D, 2-Methoxyestradiol, peptide conjugates
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(for cell-specific targeting; identification of peptide ligands for specific cell types by phage display for use in drug targeting and control of biol. processes)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2001:798040 CAPLUS Full-text

DOCUMENT NUMBER: 135:339222

TITLE: Inhibition of abnormal cell proliferation with

camptothecin or a derivative, analog, metabolite, or prodrug thereof, and combinations including

camptothecin

INVENTOR(S): Rubinfeld, Joseph
PATENT ASSIGNEE(S): Supergen, Inc., USA
SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

	PATENT NO.				KIND DATE			APPLICATION NO.						DATE 				
		2001		_				2001 2002			WO 2	001-	US12	848		2	00104	19
		W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	AZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	
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			GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,	
			LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	
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			TZ,	UA,	UG,	US,	UΖ,	VN,	YU,	ZA,	ZW							
		RW:	GH,	GM,	KΕ,	LS,	MW,	${ m MZ}$,	SD,	SL,	SZ,	TZ,	UG,	ZW,	AT,	BE,	CH,	
			CY,	DE,	DK,	ES,	FΙ,	FR,	GB,	GR,	ΙE,	ΙΤ,	LU,	MC,	NL,	PT,	SE,	
			TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GW,	$\mathrm{ML}_{m{\prime}}$	MR,	NE,	SN,	TD,	ΤG
	US	6420	378			В1		2002	0716		US 2	000-	5537	10		2	00004	20
	CA	2404	970			A1		2001	1101		CA 2	001-	2404	970		2	00104	19
	ΕP	1276	479			A2		2003	0122		EP 2	001-	9306	07		2	00104	19
		R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙΤ,	LI,	LU,	NL,	SE,	MC,	
			PT,	IE,	SI,	LT,	LV,	FΙ,	RO,	MK,	CY,	AL,	TR					
PRIOF	RIT	Y APP	LN.	INFO	. :						US 2	000-	5537	10		A1 2	00004	20
											US 1	999-	4188	62]	A2 1	99910	15
											WO 2	001-	US12	848	1	W 2	00104	19

AB A method for treating diseases associated with abnormal cell proliferation comprises delivering to a patient in need of treatment a compound selected from 20(S)-comptothecin, an analog of 20(S)-comptothecin, a derivative of

20(S)-camptothecin, a prodrug of 20(S)-camptothecin, and pharmaceutically active metabolite of 20(S)-camptothecin, in combination with an effective amount of one or more agents selected form the group consisting of alkylating agent, antibiotic agent, antimetabolic agent, hormonal agent, plant-derived agent, anti-angiogenesis agent and biol. agent. The method can be used to treat benign tumors, malignant or metastatic tumors, leukemia and diseases associated with abnormal angiogenesis.

IT 362-07-2, 2-Methoxyestradiol

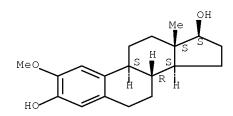
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(camptothecin or derivative, analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L24 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1999:736476 CAPLUS <u>Full-text</u>

DOCUMENT NUMBER: 131:346535

TITLE: Use of neomycin for treating angiogenesis-related

diseases

INVENTOR(S): Hu, Guo-Fu; Vallee, Bert L.

PATENT ASSIGNEE(S): The Endowment for Research In Human Biology, Inc.,

USA

SOURCE: PCT Int. Appl., 74 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT	NO.			KIN	D	DATE		APPLICATION NO.					DATE		
WO 9958	 3126			 A1	_	 1999	 1118		——— ₩0 1	 999-	 US10	 269		 1 '	9990511
W:		AL,	AM,			AZ,			–						
	CZ,	DE,	DK,	EE,	ES,	FΙ,	GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,
	IN,	IS,	JP,	ΚE,	KG,	KP,	KR,	KΖ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,
	MD,	MG,	MK,	MN,	MW,	MX,	NO,	NΖ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,
	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	UA,	UG,	US,	UZ,	VN,	YU,	ZA,	ZW
RW:	GH,	GM,	KΕ,	LS,	MW,	SD,	SL,	SZ,	UG,	ZW,	ΑT,	BE,	CH,	CY,	DE,
	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	ΙT,	LU,	MC,	NL,	PT,	SE,	BF,	ВJ,

CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG CA 2331620 Α1 19991118 CA 1999-2331620 19990511 AU 9939804 Α 19991129 AU 1999-39804 19990511 EP 1083896 20010321 EP 1999-922915 19990511 Α1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI US 6482802 В1 20021119 US 2000-700436 20001109 PRIORITY APPLN. INFO.: US 1998-84921P P 19980511 WO 1999-US10269 W 19990511

The present invention is directed to using neomycin or an analog thereof as a therapeutic agent to treat angiogenesis-related diseases, which are characterized by excessive, undesired or inappropriate angiogenesis or proliferation of endothelial cells. The present invention is also directed to pharmaceutical compns. comprising: (a) neomycin or an analog and, optionally, (b) another anti-angiogenic agent or an anti-neoplastic agent. The present invention is further directed to a method for screening neomycin analogs having anti-angiogenic activity. A preferred embodiment of the invention relates to using neomycin to treat subjects having such diseases. A dose of 20 ng neomycin/embryo or higher completely inhibited angiogenin-induced angiogenesis in the chorioallantoic membrane (CAM) assay. Neomycin inhibits angiogenin-induced angiogenesis mainly through inhibition of nuclear translocation of angiogenin.

IT 362-07-2, 2-Methoxyestradiol

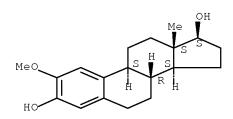
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(neomycin, its analogs and other agents for treatment of angiogenesis-related diseases)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17 β)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1994:236418 CAPLUS $\underline{\text{Full-text}}$

DOCUMENT NUMBER: 120:236418

ORIGINAL REFERENCE NO.: 120:41637a,41640a

TITLE: The endogenous estrogen metabolite

2-methoxyestradiol inhibits

angiogenesis and suppresses tumor growth

AUTHOR(S): Fotsis, Theodore; Zhang, Youming; Pepper, Michael

S.; Adlercreutz, Herman; Montesano, Roberto;

Nawroth, Peter Paul; Schweigerer

CORPORATE SOURCE: Dep. Oncol. Haematol., Child. Univ. Hosp.,

Heidelberg, 69120, Germany

SOURCE: Nature (London, United Kingdom) (1994), 368(6468),

237-9

CODEN: NATUAS; ISSN: 0028-0836

DOCUMENT TYPE: Journal LANGUAGE: English

The formation of new blood vessels (angiogenesis) is critical for the growth AΒ of tumors and is a dominant feature in various angiogenic diseases such as diabetic retinopathy, arthritis, hemangiomas and psoriasis. Recognition of the potential therapeutic benefits of controlling pathol. angiogenesis has led to a search for angiogenesis inhibitors. Here the authors report that 2methoxyestradiol, an endogenous estrogen metabolite of previously unknown function, is a potent inhibitor of endothelial cell proliferation and migration as well as angiogenesis in vitro. Moreover, when administered orally in mice, it strongly inhibits the neovascularization in solid tumors and suppresses their growth. Unlike the angiostatic steroids of corticoid structure, it does not require the co-administration of heparin or sulfated cyclodextrins for activity. Thus, 2-methoxyestradiol is the first steroid to have high antiangiogenic activity by itself. The authors' results suggest that this compound may have therapeutic potential in cancer and other angiogenic diseases.

IT 362-07-2, 2-Methoxyestradiol

RL: BIOL (Biological study)

(angiogenesis inhibitor and tumor growth

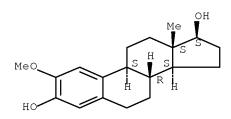
suppression activity of)

RN 362-07-2 CAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-methoxy-, (17β) - (CA INDEX

NAME)

Absolute stereochemistry.



IT 362-05-0, 2-Hydroxyestradiol

RL: BIOL (Biological study)

(vascular endothelial cell proliferation response to)

RN 362-05-0 CAPLUS

CN Estra-1,3,5(10)-triene-2,3,17-triol, (17β) - (CA INDEX NAME)

Absolute stereochemistry.

FILE 'MEDLINE' ENTERED AT 12:23:08 ON 09 JAN 2009

FILE 'BIOSIS' ENTERED AT 12:23:08 ON 09 JAN 2009

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FILE 'EMBASE' ENTERED AT 12:23:08 ON 09 JAN 2009 Copyright (c) 2009 Elsevier B.V. All rights reserved.

L25 2729 SEA ABB=ON PLU=ON L5

L26 797 SEA ABB=ON PLU=ON L25 AND (PY<1993 OR AY<1993 OR

PRY<1993)

L27 0 SEA ABB=ON PLU=ON L26 AND (NEOVASCULAR? OR NEO VASCULAR? OR ANGIOGENESIS OR ANTIANGIOGENESIS OR ANGIOGENETIC? OR

ANTIANGIOGENETIC? OR ANGIOSTATIC? OR ANTIANGIOSTATIC?)

L28 0 SEA ABB=ON PLU=ON L26 AND L14

L29 327 SEA ABB=ON PLU=ON L25 AND ((NEOVASCULAR? OR NEO VASCULAR?

OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATIC) (5A) (INHIBIT? OR PREVENT? OR TREAT? OR THERAP?) OR ANTIANGIOGENESIS OR ANTI(W) (ANGIOGENESIS OR ANGIOSTATIC?) OR ANTIANGIOGENETI

C? OR ANTIANGIOSTATIC?)

L30 14 SEA ABB=ON PLU=ON L29 AND EYE

L31 10 DUP REM L30 (4 DUPLICATES REMOVED)

L31 ANSWER 1 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2008356885 EMBASE Full-text

TITLE: The scientific contributions of M. Judah Folkman to

cancer research.

AUTHOR: Zetter, Bruce R.

CORPORATE SOURCE: Harvard Medical School, Children's Hospital Boston, 300

Longwood Avenue, Boston, MA 02115, United States.

bruce.zetter@childrens.harvard.edu

AUTHOR: Zetter, B. R. (correspondence)

CORPORATE SOURCE: Harvard Medical School, Children's Hospital Boston, 300

Longwood Avenue, Boston, MA 02115, United States.

bruce.zetter@childrens.harvard.edu

SOURCE: Nature Reviews Cancer, (August 2008) Vol. 8, No. 8, pp.

647-654. Refs: 77

ISSN: 1474-175X E-ISSN: 1474-1768 CODEN: NRCAC4

PUBLISHER: Nature Publishing Group, Houndmills, Basingstoke,

Hampshire, RG21 6XS, United Kingdom.

PUBLISHER IDENT.: NRC2458

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; General Review; (Review)

FILE SEGMENT: 016 Cancer

LANGUAGE: English SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 2 Sep 2008

Last Updated on STN: 2 Sep 2008

Dr Judah Folkman was frequently described as a highly compassionate physician who served his patients not only by performing surgery and offering them comfort and reassurance, but also by working tirelessly in the laboratory to find new approaches to the treatment of disease. His dedication to understanding the role of angiogenesis, the formation of new blood vessels, in human disease has given rise to new treatments for several diseases, including inflammatory diseases, vision-threatening diseases of the *y* and, as will be emphasized in this Perspective, cancer. .COPYRGT. 2008 Macmillan Publishers Limited. All rights reserved.

L31 ANSWER 2 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights

reserved on STN

ACCESSION NUMBER: 2007037487 EMBASE <u>Full-text</u>

TITLE: Ocular Neovascularization: Basic Mechanisms

and Therapeutic Advances.

AUTHOR: Dorrell, Michael; Uusitalo-Jarvinen, Hannele; Aguilar,

Edith; Friedlander, Martin (correspondence)

CORPORATE SOURCE: Department of Cell Biology, The Scripps Research

Institute, Department of Ophthalmology, La Jolla, CA,

United States.

SOURCE: Survey of Ophthalmology, (Jan 2007) Vol. 52, No. 1

SUPPL., pp. S3-S19.

Refs: 201

ISSN: 0039-6257 CODEN: SUOPAD

PUBLISHER IDENT.: S 0039-6257(06)00211-6

COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 012 Ophthalmology

030 Clinical and Experimental Pharmacology

037 Drug Literature Index038 Adverse Reactions Titles

LANGUAGE: English SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 14 Feb 2007

Last Updated on STN: 14 Feb 2007

The vast majority of diseases that cause catastrophic loss of vision do so as AB a result of ocular neovascularization. During normal retinal vascular development, vascular endothelial cells proliferate and migrate through the extracellular matrix in response to a variety of cytokines, leading to the formation of new blood vessels in a highly ordered fashion. During abnormal neovascularization of the iris, retina, or choroid, angiogenesis is unregulated and usually results in the formation of dysfunctional blood vessels. When these newly formed vessels leak fluid, hemorrhage, or are associated with fibrous proliferation, retinal edema, retinal/vitreous hemorrhage, or traction retinal detachments may occur resulting in potentially catastrophic loss of vision. In this review, we will briefly discuss the scope of the clinical problem and the general underlying principles of angiogenesis. We will focus on recent laboratory advances that have led to the development of therapeutics useful in the treatment of neovascular eye diseases. We will describe compounds currently in pre-clinical development stages as well as the results of clinical trials involving the use of these drugs as treatments for ocular neovascularization. . COPYRGT. 2007 Elsevier Inc. All rights reserved.

L31 ANSWER 3 OF 10 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

ACCESSION NUMBER: 2007:28491 BIOSIS Full-text

DOCUMENT NUMBER: PREV200700027040

TITLE: Antiangiogenic effect of oral 2-methoxyestradiol on

choroidal neovascularization in mice.

AUTHOR(S): Funakoshi, Taisaku; Birsner, Amy E.; D'Amato, Robert J.

[Reprint Author]

CORPORATE SOURCE: Harvard Univ, Sch Med, Vasc Biol Program, Childrens

Hosp, 300 Longwood Ave, Karp 11-210, Boston, MA 02115

USA

robert.damato@childrens.harvard.edu

SOURCE: Experimental Eye Research, (NOV 2006) Vol. 83, No. 5,

pp. 1102-1107.

CODEN: EXERA6. ISSN: 0014-4835.

DOCUMENT TYPE: Article LANGUAGE: English

ENTRY DATE: Entered STN: 27 Dec 2006

Last Updated on STN: 27 Dec 2006

AΒ We evaluated the efficacy of systemic 2-methoxyestradiol (2ME2) in a laserinduced murime model of choroidal neovascularization (CNV). C57BL/6J mice (8 week old males) were used in this study and divided into four groups. After laser treatment, daily oral treatment with vehicle control, and 30, 50, and 75 mg/kg of 2ME2 was started. Two weeks after laser treatment, digital images of CNV were obtained from fluorescein isothiocyanate-dextran (FITC-dextran) angiography and choroidal flat mount after FITC-dextran perfusion. These images were quantified by NIH image software. Analysis of images from both FITC-dextran angiography and choroidal flat mount with FITC-dextran perfusion demonstrated that the 2ME2 treated groups showed a statistically significant, dose-dependent decrease in CNV. No toxicity or weight loss was observed during the treatment. Significant antiangiogenic effects of oral 2ME2 on laser induced CNV were observed. Since 2ME2 (Panzem (R)) has demonstrated good safety in phase I/II trials for cancer, it has the potential to be used as a novel oral treatment for age-related macular degeneration. (c) 2006 Elsevier Ltd. All rights reserved.

L31 ANSWER 4 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2006456737 EMBASE <u>Full-text</u>
TITLE: Anecortave Acetate for Treating or

Preventing Choroidal Neovascularization

.

AUTHOR: Slakter, Jason S., Dr. (correspondence)

CORPORATE SOURCE: Department of Ophthalmology, New York University School

of Medicine, 530 First Avenue, New York, NY 10016,

United States. jslakter@aol.com

AUTHOR: Slakter, Jason S., Dr. (correspondence)

CORPORATE SOURCE: Vitreous Retina Macula Consultants of New York, 460

Park Avenue, 5th Floor, New York, NY 10022, United

States. jslakter@aol.com

SOURCE: Ophthalmology Clinics of North America, (Sep 2006) Vol.

19, No. 3, pp. 373-380.

Refs: 31

ISSN: 0896-1549 CODEN: OCNAF2

PUBLISHER IDENT.: S 0896-1549(06)00051-4

COUNTRY: United States

DOCUMENT TYPE: Journal; General Review; (Review)

FILE SEGMENT: 012 Ophthalmology

036 Health Policy, Economics and Management

037 Drug Literature Index 038 Adverse Reactions Titles

039 Pharmacy

LANGUAGE: English

ENTRY DATE: Entered STN: 2 Oct 2006

Last Updated on STN: 2 Oct 2006

Although there have been treatments and pharmacologic agents approved in the last several years to treat advanced stages of AMD, these treatments do not halt disease progression. Furthermore, it is clear that when dry AMD progresses to CNV in one *y**, there is a substantial risk that it will progress in the other *y**. Sight-preservation at early stages of the disease should be a key goal of research, yet there are no approved therapies for halting the progression of early stages of AMD. Patients may be encouraged to use vitamin supplements, cease smoking, and eat a healthy diet; however, these

recommendations are not appropriate for all patients, nor are they embraced by everyone. A pharmacologic agent capable of targeting the early stages of AMD would be a welcome addition to the armamentarium of options for managing AMD. Trials are ongoing to evaluate the role of anecortave acetate as a prophylactic treatment to slow the progression of the early stages of AMD. Completed clinical studies have demonstrated that anecortave acetate possesses a mechanism of action that decreases CNV growth irrespective of the inciting angiogenic stimulus, has a dosing-interval that allows its use as prophylactic therapy, and is safe. The economic benefits associated with prevention and progression to advanced AMD, in even a small proportion of cases, is significant and could result in substantial cost savings to society as a whole while providing countless benefits to individual patients in terms of continued independent function, self-sufficiency, and improved quality of life. .COPYRGT. 2006 Elsevier Inc. All rights reserved.

L31 ANSWER 5 OF 10 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 2006014844 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 16340533

TITLE: Effective transscleral delivery of two retinal

anti-angiogenic molecules: carboxyamido-triazole (CAI)

and 2-methoxyestradiol (2ME2).

AUTHOR: Cruysberg Lars P J; Franklin Alan J; Sanders Jason;

Self Cindy; Yuan Peng; Csaky Karl G; Robinson Michael

R; Kohn Elise C; Edelhauser Henry F

CORPORATE SOURCE: Department of Ophthalmology, Emory University School of

Medicine, Atlanta, Georgia 30322, USA.

CONTRACT NUMBER: P30 EY06360 (United States NEI)

SOURCE: Retina (Philadelphia, Pa.), (2005 Dec) Vol. 25, No. 8,

pp. 1022-31.

Journal code: 8309919. ISSN: 0275-004X.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

(RESEARCH SUPPORT, N.I.H., EXTRAMURAL)

(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200603

ENTRY DATE: Entered STN: 11 Jan 2006

Last Updated on STN: 8 Mar 2006 Entered Medline: 7 Mar 2006

PURPOSE: To evaluate the human transscleral diffusion and intravitreal AB delivery of carboxyamido-triazole (CAI) and 2-Methoxyestradiol (2ME2). METHODS: The transscleral diffusion of two retinal antiangiogenic molecules, CAI and 2ME2, was measured in vitro to assess their potential transscleral delivery. Varying concentrations and different solvents of CAI and 2ME2 were placed in the upper compartment of a two-chamber acrylic perfusion apparatus, on the episcleral side of the sclera obtained from human donor eyes. Samples were taken from the lower compartment (uveal side) for up to 24 hours and measured by high performance liquid chromatography. RESULTS: All three solutions that contained CAI efficiently diffused through the sclera with permeability constants that ranged from 2.8 to 5.5×10 cm/s. The scleral permeability constant derived for 2ME2 was 9.96×10 cm/s. The permeability constants obtained for both CAI and 2ME2 are similar to each other as well as to permeability constants measured for other small molecules such as fluorescein and dexamethasone fluorescein. CONCLUSION: Both CAI and 2ME2 traverse the sclera efficiently. These data combined with the reported inhibition of posterior segment neovascularization observed with these two molecules demonstrates that CAI and 2ME2 are good candidate molecules to treat posterior segment neovascularization by local delivery.

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ACCESSION NUMBER: 2004267656 EMBASE Full-text

TITLE: Development of new drugs in angiogenesis.

AUTHOR: Ziche, Marina (correspondence); Donnini, Sandra;

Morbidelli, Lucia

CORPORATE SOURCE: Lab. Pharmacol. Toxicology/Chemother, Department of

Molecular Biology, University of Siena, Via A. Moro 2,

53100 Siena, Italy. ziche@unisi.it

SOURCE: Current Drug Targets, (Jul 2004) Vol. 5, No. 5, pp.

485-493. Refs: 126

ISSN: 1389-4501 CODEN: CDTUAU

COUNTRY: Netherlands

DOCUMENT TYPE: Journal; General Review; (Review)

FILE SEGMENT: 016 Cancer

022 Human Genetics

029 Clinical and Experimental Biochemistry

O31 Arthritis and Rheumatism
O37 Drug Literature Index

039 Pharmacy

LANGUAGE: English SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 9 Jul 2004

Last Updated on STN: 9 Jul 2004

Angiogenesis, the growth of new capillaries from pre-existing vessels, AΒ contributes to the development and progression of a variety of physiopathological conditions. There is growing evidence that anti-angiogenic drugs will improve future therapies of diseases like cancer, rheumatoid arthritis and ocular neovascularisation. Conversely, therapeutic angiogenesis is an important homeostatic response contributing to limit the damage to ischemic tissues. Molecular processes involved in angiogenesis include stimulation of endothelial growth by cytokine production (i.e. vascular endothelial growth factor, VEGF; fibroblast growth factor-2, FGF-2), degradation of extracellular matrix proteins by matrix metalloproteinases (MMPs), and migration of endothelial cells mediated by integrins (cell membrane adhesion molecules). Drugs targeting pathologic angiogenesis have been designed to interfere with any of these steps and are currently undergoing evaluation in early clinical studies. Important therapeutic strategies are: suppression of activity and signaling pathways activated by the major angiogenic regulators like VEGF and FGF-2; inhibition of function of alphav-integrins and MMPs; exploitation of endogenous anti-angiogenic molecules like angiostatin and endostatin. The strategy to " silence" endothelium with antiangiogenic drugs to starve tumors, provides a novel approach for cancer treatment. The unique targets of these drugs (endothelium) make them distinct from traditional cytotoxic chemotherapeutic agents. Conversely, gene transfer of angiogenesis inducers is the new approach for therapeutic neovascularization, which is under investigation using a variety of growth factors and a wide array of potential delivery systems, including the application of the gene as naked DNA or by viral vector. The status of pro- and anti-angiogenic therapies is here presented and discussed. .COPYRGT. 2004 Bentham Science Publishers Ltd.

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ACCESSION NUMBER: 2003:543781 BIOSIS Full-text

DOCUMENT NUMBER: PREV200300539284

TITLE: 2 - METHOXYESTRADIOL SUBCONJUNCTIVAL IMPLANT IN A MODEL

OF CHOROIDAL NEOVASCULARIZATION.

AUTHOR(S): Robinson, M. R. [Reprint Author]; Yuan, P.; Baffi, J. [Reprint Author]; Byrnes, G. [Reprint Author]; Kim, H.;

Lutz, R.; Fortman, D.; Csaky, K. G. [Reprint Author]

CORPORATE SOURCE:

National Eye Institute, NIH, Bethesda, MD, USA SOURCE: ARVO Annual Meeting Abstract Search and Program

Planner, (2003) Vol. 2003, pp. Abstract No. 3943.

cd-rom.

Meeting Info.: Annual Meeting of the Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, USA. May 04-08, 2003. Association for Research in

Vision and Ophthalmology.

DOCUMENT TYPE: Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

English LANGUAGE:

ENTRY DATE: Entered STN: 19 Nov 2003

Last Updated on STN: 19 Nov 2003

AΒ Purpose: Choroidal neovascularization (CNV) in age-related macular degeneration (AMD) is a frequent cause of central vision loss in the United States. The angiogenesis inhibitor 2-methoxyestradiol (2ME2) is an endogenous metabolite of estradiol that shows promise in treating CNV. The goal of this study is to evaluate the efficacy of a 2ME2 subconjunctival implant placed in a rat model of CNV. Methods: The 2ME2 implants used a compressed 2ME2 pellet with a diameter of 1.5 mm and a thickness of 1 mm. The pellets were coated with a 20% (w/v) hydroxypropyl cellulose (HPC) solution. A model of rat CNV was done using a previously described Ad-VEGF/CNV model. The implants were inserted into the subconjunctival space of twenty-four Brown Norway rats at the same time an Ad-VEGF subretinal injection was performed to stimulate CNV production. The animals were sacrificed up to two weeks post implantation and the ayas were evaluated histologically for CNV. In vitro release rates were performed by placing the 2ME2 implants in PBS and measuring the drug concentrations over time by HPLC every 24-48 hours, each time replacing the PBS to simulate sink conditions. Results: Twelve rats received 2ME2 implants and twelve rats received sham implants (no drug). Half of the rats were sacrificed after one week and the other half after two. The subconjunctival 2ME2 implants reduced CNV by apprx50% at one week but had no effect at two weeks (Table). NUMBER OF MYES WITH CNV In vitro release rates in PBS showed a burst of drug at the initial assay and further assays were not possible because the cellulose-based implant dissolved rapidly. In vivo, the implants were not grossly visible after 1-week. Conclusions: Trans-scleral delivery of 2ME2 using a subconjunctival implant was effective in a rat CNV model at 1week. A longer release implant is being evaluated to potentially yield a more effective long-term response in the CNV model.

L31 ANSWER 8 OF 10 MEDLINE on STN DUPLICATE 2

ACCESSION NUMBER: 2002214317 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 11950241

TITLE: Safety and pharmacokinetics of intravitreal

> 2-methoxyestradiol implants in normal rabbit and pharmacodynamics in a rat model of choroidal

neovascularization.

AUTHOR: Robinson M R; Baffi J; Yuan P; Sung C; Byrnes G; Cox T

A; Csaky K G

CORPORATE SOURCE: National Eye Institute, NIH, 10 Center Dr/MSC 1863,

Bldg 10/Room 10N112, Bethesda, MD 20892-1863, USA..

robinsonm@nei.nih.gov

SOURCE: Experimental eye research, (2002 Feb) Vol. 74, No. 2,

pp. 309-17.

Journal code: 0370707. ISSN: 0014-4835.

PUB. COUNTRY: England: United Kingdom DOCUMENT TYPE: (COMPARATIVE STUDY)

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200205

ENTRY DATE: Entered STN: 13 Apr 2002

Last Updated on STN: 30 May 2002 Entered Medline: 29 May 2002

Choroidal neovascularization (CNV) is the leading cause of severe vision loss AΒ associated with age-related macular degeneration. As the pathogenesis of CNV formation is better understood, mechanism-based therapies, including the use of antiangiogenesis inhibitors, have been investigated. 2-methoxyestradiol (2ME2), an endogenous metabolite of estradiol, has been shown in the chick allantoic membrane model and the corneal micropocket assay to have antiangiogenic properties. The authors sought to determine the safety and pharmacokinetics of sustained-release intravitreal 2ME2 implants in normal rabbit and their efficacy in a rat model of CNV. 2ME2 implants were constructed using two designs: implant A, a silicone-based reservoir implant for the rabnbit eye, and implant B, a microimplant matrix design for the rat eye. In vitro release rates of both implants were determined. New Zealand white (NZW) rabbits had implant A placed in the vitreous cavity of one eye and the ocular toxicity was evaluated by clinical examination, serial electroretinography (ERG), and histopathology over a 28 week period. The steady state clearance of 2ME2 in the rabbit eye was calculated from in vivo release rates divided by steady state vitreous concentrations. A CNV model in the Brown-Norway rat was performed by injecting an adenoviral vector encoding human vascular endothelial growth factor in the subretinal space. Following the injection, a 2ME2 or sham (no drug) microimplant was placed in the vitreous cavity. Animals were killed over a 3 week period and the eyes examined for CNV by histopathology. Results showed that following a short burst, the release rate of implant A followed zero-order kinetics, typical of reservoir devices, and the cumulative release of implant B was proportional to the square root of time, as expected for a matrix delivery device. The safety studies in normal rabbit showed no ocular toxicities by clinical examination, ERG, and histopathology. Pharmacokinetic evaluation in the rabbit showed mean 2ME2 vitreous levels within the therapeutic range for the inhibition of endothelial cell proliferation. The experimental rat model showed a significant reduction in CNV in eyes treated with the 2ME2 implant. In conclusion, sustained-release 2ME2 intravitreal implants, which can be designed to deliver potentially therapeutic vitreous levels of 2ME2 for an extended period of time, appeared to be safe in normal rabbit and effective in a rat model of CNV. Sustained-release 2ME2 intravitreal implants may hold promise in the treatment of recurrent CNV refractory to standard therapy. Copyright 2002 Elsevier Science Ltd.

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ACCESSION NUMBER: 2001050805 EMBASE Full-text

TITLE: IBC's 6th annual conference on angiogenesis:

Novel the $\ensuremath{\mathsf{rapeutic}}$ developments.

AUTHOR: Mousa, S.A. (correspondence)

CORPORATE SOURCE: DuPont Pharmaceuticals Co., Wilmington, DE, United

States.

SOURCE: Expert Opinion on Investigational Drugs, (2001) Vol.

10, No. 2, pp. 387-391.

ISSN: 1354-3784 CODEN: EOIDER

COUNTRY: United Kingdom DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 012 Ophthalmology

014 Radiology 016 Cancer

037 Drug Literature Index 038 Adverse Reactions Titles

005 General Pathology and Pathological Anatomy

LANGUAGE: English SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 23 Feb 2001

Last Updated on STN: 23 Feb 2001

AΒ Angiogenesis is a process that is dependent upon co-ordinate production of angiogenesis stimulatory and inhibitory (angiostatic) molecules. Any imbalance in this regulatory circuit may lead to the development of a number of angiogenesis-mediated diseases. Angiogenesis is a multi-step process including activation, adhesion, migration, proliferation and transmigration of endothelial cells across cell matrices to or from new capillaries and from existing vessels. Angiogenesis is a process involved in the formation of new vessels by sprouting from pre-existing vessels. In contrast, vessel rudiments are sorted by a process termed vasculogenesis. Endothelial heterogeneity and organ specificity might contribute to differences in the response to different anti-angiogenic mechanisms (cultured EC versus microvascular EC isolated from different tissues). Under normal physiological conditions in mature organisms, endothelial cell turnover or angiogenesis is extremely slow (from months to years). However, angiogenesis can be activated for a limited time in certain situations such as wound healing and ovulation. In certain pathological states, such as human metastasis (oncology) and ocular neovascularisation, disorders including diabetic retinopathy and age-related macular degeneration (ophthalmology), there is excessive and sustained angiogenesis. Hence, understanding the mechanisms involved in the regulation of angiogenesis could have a major impact in the prevention and treatment of pathological angiogenic processes. Additionally, endothelial cells play a major role in the modelling of blood vessels. The interplay of growth factors, cell adhesion molecules, matrix proteases and specific signal transduction pathways either in the maintenance of the quiescent state or in the reactivation of endothelial cells is critical in physiological and pathological angiogenic processes.

L31 ANSWER 10 OF 10 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation

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ACCESSION NUMBER: 2000:274131 BIOSIS Full-text

DOCUMENT NUMBER: PREV200000274131

TITLE: Sustained-release intraocular implant for 2-methoxyestradiol; An angiostatic agent for

the treatment of choroidal

neovascularization.

AUTHOR(S): Ross, M. L. [Reprint author]; Lutz, R. J. [Reprint

author]; Yuan, P.; King, B. A. [Reprint author];

Whitcup, S. M.; Robinson, M. R.

CORPORATE SOURCE: Bioengineering and Physical Sciences Program, OD, NIH,

Bethesda, MD, USA

SOURCE: IOVS, (March 15, 2000) Vol. 41, No. 4, pp. S770. print.

Meeting Info.: Annual Meeting of the Association in Vision and Opthalmology. Fort Lauderlade, Florida, USA. April 30-May 05, 2000. Association for Research in

Vision and Ophthalmology.

DOCUMENT TYPE: Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 30 Jun 2000

Last Updated on STN: 5 Jan 2002

FILE 'CAPLUS' ENTERED AT 12:27:50 ON 09 JAN 2009

L32

179 SEA ABB=ON PLU=ON L6 AND ((NEOVASCULAR? OR NEO VASCULAR?
OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATIC) (5A) (INHIBIT
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ANTI(W) (ANGIOGENESIS OR ANGIOSTATIC?) OR ANTIANGIOGENETIC?
OR ANTIANGIOSTATIC?)

L33

44 SEA ABB=ON PLU=ON L32 AND EYE
L34

33 SEA ABB=ON PLU=ON L33 AND (ADMIN? OR DRUG(3A) DELIVER?)

L35

0 SEA ABB=ON PLU=ON L34 NOT L24

FILE 'MARPAT' ENTERED AT 12:29:10 ON 09 JAN 2009
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FILE CONTENT: 1961-PRESENT VOL 149 ISS 26 (20090102/ED)

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US 20080287535 20 NOV 2008 DE 102008000872 13 NOV 2008 1992620 19 NOV 2008 EΡ JΡ 2008291018 04 DEC 2008 2008141234 20 NOV 2008 WO GB 2449363 19 NOV 2008 FR 2915993 14 NOV 2008 2338533 20 NOV 2008 RU CA 2587880 04 NOV 2008

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L36 STR

VAR G1=OH/23/25/27 NODE ATTRIBUTES:

CONNECT IS X2 RC AT CONNECT IS X2 RC AT CONNECT IS X2 RC AT 9 CONNECT IS X2 RC AT 10 CONNECT IS X2 RC AT 11 CONNECT IS X2 RC AT 12 CONNECT IS X3 RC AT 15 CONNECT IS X2 RC AT 16 CONNECT IS X2 RC AT 17 DEFAULT MLEVEL IS ATOM MLEVEL IS CLASS AT 24 29 GGCAT IS LOC AT 24 GGCAT IS LOC AT 29 DEFAULT ECLEVEL IS LIMITED GRAPH ATTRIBUTES: RSPEC I NUMBER OF NODES IS 30 STEREO ATTRIBUTES: NONE ATTRIBUTES SPECIFIED AT SEARCH-TIME: ECLEVEL IS LIM ON ALL NODES ALL RING(S) ARE ISOLATED L38 34 SEA FILE=MARPAT SSS FUL L36 (MODIFIED ATTRIBUTES) 100.0% PROCESSED 1186 ITERATIONS 34 ANSWERS SEARCH TIME: 00.00.01 FILE 'CAPLUS' ENTERED AT 12:30:11 ON 09 JAN 2009 L39 34 S L38 L40 8 S L39 AND (PY<1993 OR AY<1993 OR PRY<1993) FILE 'MARPAT' ENTERED AT 12:30:59 ON 09 JAN 2009 8 S L40 L41 ANSWER 1 OF 8 MARPAT COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 125:212668 MARPAT Full-text Synergistic compositions containing TITLE: poly(ADP-ribose) polymerase ligands as antitumor or anti-retroviral agents INVENTOR(S): Kun, Ernest; Mendeleyev, Jerome; Kirsten, Eva PATENT ASSIGNEE(S): Octamer, Inc., USA SOURCE: PCT Int. Appl., 116 pp. CODEN: PIXXD2 DOCUMENT TYPE: Patent LANGUAGE: English FAMILY ACC. NUM. COUNT: 9 PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE ____ _____ _____ WO 9622791 A1 19960801 WO 1996-US420 19960116 W: AL, AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

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                                         US 1993-76313 19930611
                                         US 1993-87566
                                                        19930702
                                         WO 1996-US420 19960116
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AΒ Novel synergistic compns. useful for inactivating viruses or inducing apoptosis in tumor cells and for treating cancer or retroviral infections comprise ≥1 ligand that oxidatively attacks a Zn finger of poly(ADP-ribose) polymerase (I) in combination with (a) an agent that decreases cellular levels of GSH and (b) a ligand that noncovalently binds to the nicotinamide site of I but does not effect In ejection from a In finger of I. Inactivation of I prevents poly(ADP-ribosyl)ation and repression of nuclear Ca2+/Mg2+-dependent endonuclease, the enzyme responsible for DNA degradation and apoptosis. Compds. which oxidize the Cys-X2-Cys-X4-His-X4-Cys (CCHC) sequence in the Zn finger domain of I include benzopyrone, benzamide, isoquinolone, estrane, and trans-3,4-diphenyl-3-hexene derivs. Thus, 4-iodo-3-nitrobenzoic acid, 4-iodo-3-nitrosobenzoic acid, or 3-nitrobenzoic acid, each in combination with DLbuthionine sulfoximine (an inhibitor of GSH biosynthesis), showed rapid synergistic cytocidal effects in both Molt-4 and L-1210 cells; buthionine sulfoximine decreased the rate at which the active nitroso compds. (formed metabolically from the nitro compds.) were chemical reduced and inactivated by GSH.

L41 ANSWER 2 OF 8 MARPAT COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 121:35983 MARPAT Full-text

TITLE: Method of alkylating estrone derivatives

INVENTOR(S):
Seilz, Carsten; Huebl, Dieter

PATENT ASSIGNEE(S): Schering A.-G., Germany SOURCE: PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PAT	CENT I	7O.		KIND	DATE		APP	LICATIO	ON NO.	DATE			
	WO	9409	024		A1	19940428		WO	 1993-Е	2905	19931	.021		
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		RW:	ΑT,	BE,	CH, DE,	, DK, ES,	FR,	GB, G	GR, IE,	IT, LU,	MC,	NL,	PT,	SE
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	ΕP	6658	49		A1	19950809		EP	1993-92	23513	19931	.021		
	ΕP	6658	49		B1	19970827								
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PRIO	RIT	APP:	LN.	INFO	.:			DE	1992-42	235657	19921	022		
								WO	1993-EI	2905	19931	021		
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OTHER SOURCE(S): CASREACT 121:35983

AB The invention concerns a method of alkylating estrone (I) derivs. A suspension of a I derivative (5-20, especially 8-15 weight%) in DMF is

prepared A carbonic acid diester (1-5, especially 2-4 mol per alkylated OH group) is added, as well as a guanidine and/or an alkylguanidine catalyst (1-10, especially 3-7 mol% based on I derivative). The mixture is freed of oxygen, and then warmed continuously to $100-200^{\circ}$ (especially $130-170^{\circ}$), allowing reaction to proceed at the resulting pressure for 3-36 h. For example, a solution of I, (MeO)2CO, and tetramethylguanidine in DMF at 40° was deoxygenated with introduction of N in an ultrasound bath, then stirred in an autoclave for 24 h at 130° to give I Me ether in 96% yield and 99% purity. In contrast, much lower purity was obtained by omitting the deoxygenation step (90%), by using KOBu-tert catalyst (57%), or by using other solvents (THF < 30° , Bu glycol acetate < 25°).

L41 ANSWER 3 OF 8 MARPAT COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 120:134926 MARPAT Full-text

TITLE: Preparation of estrogen bisphosphonates for

treatment of bone diseases

INVENTOR(S): Nakamura, Toshio; Katsumata, Takashi; Yamamoto,

Michihiro

PATENT ASSIGNEE(S): Sumitomo Pharmaceuticals Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05222073	A	19930831	JP 1992-59642	19920213
PRIORITY APPLN. INFO.	:		JP 1992-59642	19920213
GI				

$$ER^{1}Y^{1}R^{2}Z^{1}C$$
 $C \equiv CH$
 $R^{4}OR^{3}$
 $C \equiv C(CH_{2})$
 $C \equiv CHMe_{2}$
 $OCHMe_{2}$
 $OCHMe_{2}$
 $OCHMe_{2}$
 $OCHMe_{2}$
 $OCHMe_{2}$
 $OCHMe_{2}$
 $OCHMe_{2}$

The title compds. [I; E = estrogen residue; R1 = bond, alkylene; R2 = alkylene, alkenylene, alkynylene; R3 = H, alkyl; R4 = OH, alkyl, alkoxy; Y1 = bond, O, S(O)n (wherein n = 0, 1, 2), NR5 (wherein R5 = H, alkyl), CONR6 (wherein R6 = H, alkyl); Z1 = bond, O, S, NH; Z2 = H, alkyl, alkylthio, OH, NH2], useful in treating such bone diseases as osteoporosis, are prepared A solution of 1.6M BuLi/hexane was added to a solution of estratriene II (THP =

tetrahydro-2-pyranyl) in THF at 0° and stirred at room temperature, to the solution was added I(CH2)3CMe[PO(OCHMe2)2]2, and the solution was stirred at room temperature and then acidified to pH 1 to give 96% bisphosphonate III. at 3 mg/kg s.c. per day in mice for 3 wk gave a bone salt concentration of 120.4 ± 3.96 mg/cm2, vs. 103.1 ± 2.25 mg/cm2 for controls.

L41 ANSWER 4 OF 8 MARPAT COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 119:188569 MARPAT <u>Full-text</u>

TITLE: Preparation of catechol estrogen-cyclodextrin

inclusion compounds and their use as inhibitors

for peroxylipids

INVENTOR(S): Suzuki, Tatsuhiko; Yukimura, Sadaaki; Ishida,

Naoko; Ooishi, Shigeko; Yagi, Kunio

PATENT ASSIGNEE(S): Oyo Seikagaku Kenkyusho, Japan SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05178883	A	19930720	JP 1991-275001	19910927
PRIORITY APPLN. INFO.	:		JP 1991-275001	19910927

GΙ

AB Peroxylipid inhibitors, useful for treatment of inflammation and cardiovascular diseases, etc., contain inclusion compds. of catechol estrogens I (R1 = OH; R2 = H, ethynyl; R1R2 may be O; R3 = H, OH) with β - or γ -cyclodextrin or their derivs. The inclusion compds. show much better watersolubility than the estrogens themselves. 2-Hydroxyestradiol (II) was ultrasonicated with β -cyclodextrin in H2O to give 84% inclusion compound, which inhibited peroxylipid formation as strongly as II itself. LD50 of the inclusion compound was 1910 mg/kg i.p. in mice. Tablets were formulated containing the inclusion compound 60, lactose 60, starch 174, talc 5, and Mg stearate 1 mg.

L41 ANSWER 5 OF 8 MARPAT COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 119:117610 MARPAT Full-text

TITLE: Preparation of catechol estrogen glycosides as

lipid peroxidation inhibitors

INVENTOR(S): Suzuki, Takehiko; Komura, Sadaaki; Ishida, Naoko;

Ohishi, Nobuko; Yagi, Kunio

PATENT ASSIGNEE(S): Institute of Applied Biochemistry, Japan

SOURCE: Eur. Pat. Appl., 34 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	K	IND	DATE A			PLICATION NO.	DATE	
EP 535595			1993040	– – 7 E	IP	1992-116648	19920929	
EP 535595	Ā	£3	19930505	5				
EP 535595	I	31	19970702	2				
R: DE	, FR, GB							
JP 0517078	6 <i>I</i>	A.	19930709	9 ј	JΡ	1991-278973	19911001	
JP 3034093		32	2000041	7				
JP 0517079	0 7	P.	19930709	9 J	JΡ	1991-293801	19911015	
JP 0517078	7 7	P.	19930709	9 J	JΡ	1991-293802	19911015	
JP 3034095	Ι	32	2000041	7				
JP 0520209	2 <i>I</i>	P.	19930810) J	JΡ	1991-303874	19911024	
JP 3034098	Ι	32	2000041	7				
JP 0529499	1 \bar{z}	P.	19931109	9 J	JΡ	1992-125471	19920420	
JP 3128579	I	32	20010129	9				
JP 0529498	7 7	P.	19931109	9 J	JΡ	1992-125472	19920420	
JP 3128580	Ι	32	20010129	9				
CA 2078804			19930402	2 C	CA	1992-2078804	19920922	
CA 2078804	(C	20030225	5				
US 5405944	Ā	£.	19950413	1 U	JS	1992-950512	19920925	
EP 688785	Ā	A 2	1995122	7 E	ΞP	1995-113118	19920929	
EP 688785	Ā	£3	19970108	3				
EP 688785	I	31	20000105	5				
R: DE	, FR, GB							
US 5739302	Ā	Ŧ.	1998041			1994-322711	19941005	
PRIORITY APPLN.	INFO.:					1991-278973	19911001	
				J	JΡ	1991-293801	19911015	
				J	JΡ	1991-293802	19911015	
						1991-303874	19911024	
				J	JΡ	1992-125471	19920420	
						1992-125472	19920420	
						1992-950512	19920925	
				E	ΞP	1992-116648	19920929	
OTHER SOURCE(S)	:	CAS	REACT 1	19:117610)			

$$\begin{array}{c} \text{Me} \\ \text{X} \\ \text{R13} \end{array}$$

AB Title compds. (I; X = CO, CR10R2; R10, R12, R13 = OH, glycosyloxy; R2 = H, ethynyl; R11 = H, OH, glycosyloxy), were prepared Thus, estradiol was converted to the diacetate with Ac2O pyridine (100%) and the diacetate was heated with AlCl3/AcCl in PhNO2 to give 85% 2-acetylestradiol 17-acetate, which was converted to 2-hydroxyestradiol 17-acetate 3-benzyl ether, which was condensed with acetobromoglucose using CdCO3 in refluxing benzene to give

GΙ

63.3% coupling product. This was saponified and hydrogenolyzed to give 2-hydroxyestradiol 2-(β -D-glucopyranoside). This at 1 nM in rat liver homogenate gave 77% inhibition of lipid peroxidn.

L41 ANSWER 6 OF 8 MARPAT COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 114:43309 MARPAT Full-text

TITLE: Preparation of sulfonic acid-substituted aromatic

steroids as inhibitors of steroid

 5α -reductase

INVENTOR(S): Holt, Dennis Alan; Metcalf, Brian Walter; Levy,

Mark Alan

PATENT ASSIGNEE(S): SmithKline Beecham Corp., USA

SOURCE: Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA'	PATENT NO.			KII	ND	DATE			API	PLICATION NO.	DATE
EP	375347			 A:	1 19900627				EP	1989-313260	19891219
EP	375347			В	1 19941221						
	R:	ΑT,	BE,	CH,	DE,	, ES,	FR,	GB,	GR,	IT, LI, LU, N	L, SE
US	4970	205		Α		1990	1113		US	1988-290020	19881223
${ t IL}$	91968			Α		19941021 IL				1989-91968	19891012
CN	1051181			Α		1991	0508		CN	1989-108217	19891024
CA	2005	215		A.	1	1990	0623		CA	1989-2005215	19891212
ZA	8909	669		Α		1990	1128		ZA	1989-9669	19891218
DK	8906	451		Α		1990	0624		DK	1989-6451	19891219
ES	2066	003		T	3	1995	0301		ES	1989-313260	19891219
AU	8947	005		Α		1990	0628		AU	1989-47005	19891220
AU	6275	28		B	2	1992	0827				
JP	0222	5494		Α		1990	0907		JP	1989-330927	19891220
AU	9229	602		А		1993	0121		AU	1992-29602	19921124
AU	6556	91		В	2	1995	0105				
PRIORIT	Y APP	LN.	INFO.	. :					US	1988-290020	19881223
OTHER S	OURCE	(S):			CAS	SREAC'	Γ 114	4:433	309		

GΙ

Title steroids I [X1, X2, X3 = H, C1, F, Br, iodo, CF3, alkyl, OH, alkoxy, CN, NO2, N(R1)2, CO2R1, CHO; R = (1) α -H, α -OH, or α -OAc, and/or various carbonyl-containing mono- or divalent radicals, (2) β -acylamino, β -cyano, or β -tetrazolyl and α -H, (3) keto, etc.; R1 = H, alkyl] and their salts were prepared For example, Me estrone underwent a sequence of conversion to its enol triflate, aminocarbonylation using (iso-Pr)2NH, hydrogenation of Δ 16, and demethylation of 3-OMe to give 3-hydroxyestr-1,3,5(10)-triene-17 β -(N,N-diisopropylcarboxamide). Acylation of 3-OH with Me2NC(S)Cl, isomerization, and hydrolysis gave the 3-thiol, which was oxidized by O and KOH in DMF to give K estratrienesulfonate derivative II. The inhibition constant (Ki) of II for steroid 5α -reductase from hyperplastic human prostate was 10 nM. Ten I are claimed, and prepns. with data are given for addnl. precursors of I.

L41 ANSWER 7 OF 8 MARPAT COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 111:3759 MARPAT Full-text

TITLE: Radioassay of catechol estrogen receptor for

breast cancer diagnosis

INVENTOR(S):
Kubodera, Akiko

PATENT ASSIGNEE(S): Research Development Corp. of Japan, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

Ι

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
JP 63090762	A	19880421	JP 1986-235646	19861003		
JP 2556843	В2	19961127				
PRIORITY APPLN. INFO.	:		JP 1986-235646	19861003		
GI						

$$R^1$$
 R^2
 $3H$

AB Catechol estrogen receptor in cells is assayed with labeled catechol estrogens. [6,7-3H]-2,3-Dihydroxyestra-1,3,5(10)-trien-17-one and [6,7-3H]-3,4-dihydroxyestra-1,3,5(10)-trien-17-one were prepared from [6,7-3H]-3-hydroxyestra-1,3,5(10)-trien-17-one. Tissues from rats with exptl. induced breast cancer were chopped, homogenized, centrifuged, and the supernatant was mixed with an equal volume of TEDA-buffer containing 0.5% Norit SX-3 and 0.05% dextrin (III) and again centrifuged at 800 + g and 4° for 15 min. The cell membrane fraction was incubated with [6,7-3H]estrogen (+ cold estrogen 0.5-10 mM), and then with III at 4° for 15 min, centrifuged at 800 + g for 15 min, and the supernatant was counted for receptor determination

ΙI

L41 ANSWER 8 OF 8 MARPAT COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 102:216030 MARPAT Full-text

TITLE: Compounds and compositions for inhibiting estrogen

sulfotransferase activity, and intermediates for

them

INVENTOR(S): Brooks, Samuel C.; Horwitz, Jerome P.

PATENT ASSIGNEE(S): Wayne State University, USA

SOURCE: U.S., 13 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

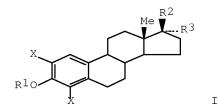
PATENT NO. KIND DATE APPLICATION NO. DATE

US 4496555 A 19850129 US 1983-515335 19830719

PRIORITY APPLN. INFO.: US 1983-515335 19830719

OTHER SOURCE(S): CASREACT 102:216030

GΙ



AB The preparation of a series of deoxyestrone derivs. (I) [R1 = phenyl-1H-tetrazol-5-yl; R2 = R3 = OH, H, = O; X = halogen, nitro, amino, hydroxy] to be used as estrogen sulfotransferase <math>[9032-76-2] inhibitors for the prevention of blastocyst implantation is described.

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L42	912 SEA ABB=ON PLU=ON ("D'AMATO R"? OR "DAMATO R"? OR "D
	AMATO R"?)/AU
L43	186 SEA ABB=ON PLU=ON "FOLKMAN M"?/AU
L44	17 SEA ABB=ON PLU=ON L43 AND L42
L45	298 SEA ABB=ON PLU=ON ((L42 OR L43)) AND ((NEOVASCULAR? OR
	NEO VASCULAR? OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATI
	C)(5A)(INHIBIT? OR PREVENT? OR TREAT? OR THERAP?) OR
	ANTIANGIOGENESIS OR ANTI(W) (ANGIOGENESIS OR ANGIOSTATIC?
	OR ANGIOGENETIC?) OR ANTIANGIOGENETIC? OR ANTIANGIOSTATIC?)
L46	60 SEA ABB=ON PLU=ON L45 AND EYE
L47	33 SEA ABB=ON PLU=ON L46 AND (ADMIN? OR DRUG(3A) DELIVER?)
L48	20 SEA ABB=ON PLU=ON L47 AND (MAMMAL? OR HUMAN)
L49	2 SEA ABB=ON PLU=ON L44 AND ((NEOVASCULAR? OR NEO VASCULAR?
	OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATIC) (5A) (INHIBI
	T? OR PREVENT? OR TREAT? OR THERAP?) OR ANTIANGIOGENESIS
	OR ANTI(W) (ANGIOGENESIS OR ANGIOSTATIC? OR ANGIOGENETIC?)
	OR ANTIANGIOGENETIC? OR ANTIANGIOSTATIC?)
L50	21 SEA ABB=ON PLU=ON L48 OR L49
L51	20 DUP REM L50 (1 DUPLICATE REMOVED)

L51 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2006:193684 CAPLUS Full-text DOCUMENT NUMBER: 144:249258

TITLE: Method for the inhibition of

angiogenesis or cancer using protective

antigen related molecules

INVENTOR(S): Rogers, Michael S.; D'Amato, Robert J.;

Christensen, Kenneth

PATENT ASSIGNEE(S): Children's Medical Center Corporation, USA;

Fellows of Harvard College

SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.					KIND DATE			APPLICATION NO.						DATE		
WO	WO 2006023332			A2 20060302		1	WO 2005-US28296					20050810				
	W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	ΑZ,	BA,	BB,	ВG,	BR,	BW,	BY,	BZ,	CA,
		CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,
		GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,
		KP,	KR,	KΖ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,
		MW,	MX,	MZ,	NA,	NG,	NΙ,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,
		SC,	SD,	SE,	SG,	SK,	SL,	SM,	SY,	ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,
		UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW						
	RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,
		ΙE,	IS,	ΙΤ,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,
		BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,

TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2004-603239P P 20040820

AB The present invention develops a therapy for cancers using the protective antigen related mols. (PARMs) without anthrax lethal factor with antiangiogenic or anticancer properties. The invention describes a method of inhibiting an angiogenic disease/disorder or cancer. The invention also claims the application of PARMs to those at risk for developing cancer or an angiogenic disease/disorder by administering to a mammal an angiogenesis—inhibiting or cancer inhibiting amount of an PARMs.

L51 ANSWER 2 OF 20 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

ACCESSION NUMBER: 2007:82015 BIOSIS Full-text

DOCUMENT NUMBER: PREV200700078216

TITLE: Use of nitrogen substituted thalidomide analogs for the

treatment of macular degenerator.

AUTHOR(S): Anonymous; Shah, Jamshed H. [Inventor]; Conner, Barry

P. [Inventor]; Swartz, Glenn M. [Inventor]; Hunsucker,

Kimberly A. [Inventor]; Rougas, John [Inventor];
D'Amato, Robert J. [Inventor]; Pribluda, Victor

[Inventor]; Treston, Anthony [Inventor]

CORPORATE SOURCE: Brookeville, MD USA

ASSIGNEE: Celgene Corporation

PATENT INFORMATION: US 07153867 20061226

SOURCE: Official Gazette of the United States Patent and

Trademark Office Patents, (DEC 26 2006)

CODEN: OGUPE7. ISSN: 0098-1133.

DOCUMENT TYPE: Patent LANGUAGE: English

ENTRY DATE: Entered STN: 24 Jan 2007

Last Updated on STN: 24 Jan 2007

AB The present invention comprises a group of compounds that effectively inhibit angiogenesis. More specifically, nitrogen-substituted thalidomide analogs and di-substituted thalidomide analogs have been shown to inhibit angiogenesis.

Importantly, these compounds can be administered orally.

L51 ANSWER 3 OF 20 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

ACCESSION NUMBER: 2007:28491 BIOSIS Full-text

DOCUMENT NUMBER: PREV200700027040

TITLE: Antiangiogenic effect of oral 2-methoxyestradiol on

choroidal neovascularization in mice.

AUTHOR(S): Funakoshi, Taisaku; Birsner, Amy E.; D'Amato,

Robert J. [Reprint Author]

CORPORATE SOURCE: Harvard Univ, Sch Med, Vasc Biol Program, Childrens

Hosp, 300 Longwood Ave, Karp 11-210, Boston, MA 02115

USA

robert.damato@childrens.harvard.edu

SOURCE: Experimental Eye Research, (NOV 2006) Vol. 83, No. 5,

pp. 1102-1107.

CODEN: EXERA6. ISSN: 0014-4835.

DOCUMENT TYPE: Article LANGUAGE: English

ENTRY DATE: Entered STN: 27 Dec 2006

Last Updated on STN: 27 Dec 2006

AΒ We evaluated the efficacy of systemic 2-methoxyestradiol (2ME2) in a laserinduced murime model of choroidal neovascularization (CNV). C57BL/6J mice (8 week old males) were used in this study and divided into four groups. After laser treatment, daily oral treatment with vehicle control, and 30, 50, and 75 mg/kg of 2ME2 was started. Two weeks after laser treatment, digital images of CNV were obtained from fluorescein isothiocyanate-dextran (FITC-dextran) angiography and choroidal flat mount after FITC-dextran perfusion. images were quantified by NIH image software. Analysis of images from both FITC-dextran angiography and choroidal flat mount with FITC-dextran perfusion demonstrated that the 2ME2 treated groups showed a statistically significant, dose-dependent decrease in CNV. No toxicity or weight loss was observed during the treatment. Significant antiangiogenic effects of oral 2ME2 on laser induced CNV were observed. Since 2ME2 (Panzem (R)) has demonstrated good safety in phase I/II trials for cancer, it has the potential to be used as a novel oral treatment for age-related macular degeneration. (c) 2006 Elsevier Ltd. All rights reserved.

L51 ANSWER 4 OF 20 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights

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ACCESSION NUMBER: 2007245297 EMBASE Full-text

TITLE: Ocular versus extraocular neovascularization: Mirror

images or vague resemblances.

AUTHOR: Campochiaro, Peter A. (correspondence)

CORPORATE SOURCE: Department of Ophthalmology, Johns Hopkins University

School of Medicine, Baltimore, MD, United States.

pcampo@jhmi.edu

AUTHOR: Campochiaro, Peter A. (correspondence)

CORPORATE SOURCE: Maumenee 719, Johns Hopkins University School of

Medicine, 600 N. Wolfe Street, Baltimore, MD 21287-9277, United States. pcampo@jhmi.edu

AUTHOR: Campochiaro, Peter A. (correspondence); Alani, Rhoda;

Nathans, Jeremy; Semenza, Gregg; Tuder, Rubin; Wagner,

Elizabeth

CORPORATE SOURCE: Johns Hopkins University, Baltimore, MD, United States.

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AUTHOR: Alitalo, Kari

CORPORATE SOURCE: Biomedicum Helsinki, Helsinki, Finland.

AUTHOR: Brooks, Peter

CORPORATE SOURCE: New York University, New York, NY, United States.

AUTHOR: Caldwell, Ruth

CORPORATE SOURCE: Medical College of Georgia, Augusta, GA, United States.

AUTHOR: Carmeliet, Peter

CORPORATE SOURCE: University of Leuven, Leuven, Belgium. AUTHOR: Claudio, Pier Paolo; Giordano, Antonio

CORPORATE SOURCE: Temple University, Philadelphia, PA, United States.

AUTHOR: D'Amato, Robert

CORPORATE SOURCE: Children's Hospital, Harvard, Boston, MA, United States

•

AUTHOR: Das, Arup

CORPORATE SOURCE: University of New Mexico, Albuquerque, NM, United

States.

AUTHOR: De Martin, Rainer

CORPORATE SOURCE: University of Vienna, Vienna, Austria.

AUTHOR: Detmar, Michael; Neri, Dario

CORPORATE SOURCE: Swiss Federal Institute of Technology, Zurich,

Switzerland.

AUTHOR: Ferrara, Napoleone

CORPORATE SOURCE: Genentech, San Francisco, CA, United States.

AUTHOR: Frank, Robert N.

CORPORATE SOURCE: Wayne State University, Detroit, MI, United States.

AUTHOR: Fruttiger, Marcus

CORPORATE SOURCE: Wolfson Institute for Biomedical Research, London,

United Kingdom.

Grant, Maria AUTHOR:

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Hellstrom, Mats

CORPORATE SOURCE: AngioGenetics Sweden AB, Goteborg, Sweden.

AUTHOR:

Hinton, David

Doheny Eye Institute, Los Angeles, CA, United States. CORPORATE SOURCE:

AUTHOR:

Keshet, Eli CORPORATE SOURCE: Hadassah Hebrew University, Jerusalem, Israel.

Koch, Alisa

AUTHOR:

CORPORATE SOURCE: University of Michigan, Ann Arbor, MI, United States.

AUTHOR:

Lang, Richard

Plouet, Jean

Sheibani, Nader

CORPORATE SOURCE: Children's Hospital Research Foundation, Cincinnati,

OH, United States.

AUTHOR:

CORPORATE SOURCE:

McDonald, Donald University of California, San Francisco, CA, United

States.

Neufeld, Gera AUTHOR:

CORPORATE SOURCE: Israel Institute of Technology, Haifa, Israel.

AUTHOR:

CORPORATE SOURCE: Institut des Vaisseaux et du Sang, Paris, France.

AUTHOR:

CORPORATE SOURCE: University of Wisconsin, Madison, WI, United States.

AUTHOR:

Shima, David CORPORATE SOURCE: Eyetech Pharmaceuticals, Woburn, MA, United States.

AUTHOR:

Thorpe, Philip

CORPORATE SOURCE:

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AUTHOR: Volpert, Olga

Northwestern University, Chicago, IL, United States. CORPORATE SOURCE:

AUTHOR:

University of Wurzburg, Germany. CORPORATE SOURCE:

Weber, Bernhard

AUTHOR:

Wiegand, Stanley

Regeneron Pharmaceuticals, Tarrytown, NY, United States CORPORATE SOURCE:

Investigative Ophthalmology and Visual Science, (Feb SOURCE:

2006) Vol. 47, No. 2, pp. 462-474.

Refs: 116

ISSN: 0146-0404 CODEN: IOVSDA

COUNTRY: United States Journal; Article DOCUMENT TYPE: FILE SEGMENT: 012 Ophthalmology

> 029 Clinical and Experimental Biochemistry

037 Drug Literature Index

005 General Pathology and Pathological Anatomy

LANGUAGE: English SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 21 Jun 2007

Last Updated on STN: 21 Jun 2007

There are several pieces of evidence that suggest that neovascularization AB differs depending on its location within the body and the underlying disease process. EG-VEGF and BV8 stimulate angiogenesis in some tissues and not others. They may be unique or there may be other tissue-specific stimulators of angiogenesis that have not yet been identified. Their existence indicates that the "formula" for angiogenesis may have different " ingredients" in

different tissues. The norrin/Fz4 ligand-receptor pair controls organspecific vascularization in the retina and inner ear, which suggests that a signaling system used throughout the body may have a structurally unrelated ligand in one or two tissues that use the system for a specific purpose perhaps adding to local diversity in regulation of the vasculature. HIF-1 is a central player, because it upregulates several proangiogenic proteins, but it does not upregulate the same ones in all cells; therefore, it may have somewhat different effects in different tissues. Id proteins are transcription factors that downregulate the antiangiogenic TSP1 and the proangiogenic receptor CXCR4. Their effect on angiogenesis in a particular tissue or disease process varies depending on which of these two opposite effects predominates. The local environment influences gene expression in endothelial cells. Endothelial cells participating in neovascularization express proteins that are not expressed in endothelial cells of normal vessels, forming the basis for vascular targeting. Even normal vascular cells in different tissues express different proteins, which has led to the concept of "molecular ZIP codes." Differences in gene expression underlie differences in cell response to various signaling molecules and are likely to contribute to different responses to proangiogenic and antiangiogenic molecules in different vascular beds. There are many examples of vascular cells in different tissues, or sometimes in the same tissue, that respond to the same stimulus in different ways. In some cases, the mechanism is known or suspected, and in other cases it is not. 1. Cells can be programmed to respond to the same angiogenic stimulus in different ways. This programming is exemplified by tip and stalk cells, specialized endothelial cells that occur in close proximity and respond to VEGF in different ways. 2. A receptor expressed in different cells may act differently. For example, in vascular endothelial cells, Ang2 blocks phosphorylation of Tie2; but when Tie2 is expressed in other cell types, Ang2 promotes phosphorylation of Tie2 rather than blocking it. It is not known whether such differences also exist among different types of endothelial cells. 3. Increased expression of VEGF can stimulate sprouting of new vessels from some vascular beds, but not others. Permissive factors are needed for VEGF to induce sprouting, and in some vascular beds they are constitutively expressed. 4. Increased expression of Angl promotes neovascularization in skin and suppresses it in the retina and choroid. The mechanism causing this difference is not known. 5. Increased expression of TIMP1 blocks neovascularization in some tissues, but stimulates it in the retina. A possible explanation for the different effects of proteinases or proteinase inhibitors in different settings is that proteolytic cleavage of ECM or ECM-associated proteins can yield both stimulators and inhibitors of angiogenesis, and one or the other may predominate, depending on the specific makeup of the ECM in a tissue. 6. Cell types that are unique to a certain tissue, such as the RPE, may influence new vessel growth or regression, adding to local differences. The tissue-specific aspects of angiogenesis have several important implications. It should not be assumed that experiments in chick chorioallantoic membrane, the cornea, or tumor models predict what will happen with regard to retinal and choroidal neovascularization. Normal retinal vascular development is, at best, an imperfect model of retinal neovascularization in adults. Although these processes have some similarities, they also have many differences, and effects of drugs or gene products on retinal vascular development may not predict effects on retinal neovascularization. Likewise, just because one VEGF antagonist inhibits retinal vascular development and another one does not, it does not follow that the latter one is safer in adults. In several respects, mature retinal vessels in adults do not behave like newly developed retinal vessels in neonates. The potential for developmental stage-specific effects on ocular vessels should not be overlooked. Increased expression of VEGF in RPE cells during embryonic life results in thickening of the choroid due to increased developmental growth, but if VEGF is expressed in the RPE in adult animals, there is no phenotype. It appears that embryonic choroidal vessels

are responsive to VEGF, but adult choroidal vessels are not. This is similar to the developmental window between PO and P7 when the superficial capillaries of the retina are responsive to VEGF. Also, although increased expression of VEGF does not cause sprouting of new vessels from adult choriocapillaris, it does not mean that that VEGF does not provide survival signals to the choriocapillaris in adults. VEGF is essential for the maintenance of fenestrated capillaries in several organs, and since the choriocapillaris is fenestrated, the effects of long-term VEGF blockade should be studied. Caution should be exercised in designing clinical trials to investigate a drug for retinal or choroidal neovascularization based on clinical or preclinical results in other vascular beds. For example, based on the effects of interferon $\alpha 2a$ in patients with cutaneous hemagiomas and results in a monkey model in which interferon $\alpha 2a$ inhibited iris neovascularization, (115) it was hypothesized that interferon $\alpha 2a$ would also inhibit choroidal neovascularization. However in a large trial, patients with neovascular AMD treated with interferon α 2a did worse than patients treated with placebo.(116) Although it is important to identify differences among different types of neovascularization, it is equally important to identify similarities. The central role of VEGF as a stimulator and survival signal in most types of neovascularization makes it a major therapeutic target. VEGF antagonists have been found to provide benefit for tumor angiogenesis and choroidal neovascularization, and several new VEGF antagonists are being tested for each indication. Another VEGF family member, P1GF, has been implicated as a stimulator of both tumor and ocular angiogenesis, and two other family members, VEGF-C and -D, function primarily as stimulators of lymphangiogenesis, but they can also stimulate angiogenesis. Thus, it is reasonable to attempt to neutralize all members of the VEGF family in the treatment of retinal and choroidal neovascularization. VEGF antagonists are not likely to be displaced in the treatment of choroidal neovascularization, but rather will serve as the foundation to which other drugs are added. Likely candidates are antagonists of Tie2, PDGF-B, and integrins, to eliminate survival signals for new vessels and, we hope, allow for regression. Because HIF-1 upregulates several angiogenic factors, it is also an appealing target, because antagonizing it should resemble combination treatment. Finally, unlike many organs, the eye affords good opportunities for local, sustained delivery. In addition to identifying molecular targets and developing good antagonists, a critical challenge for the future is to determine pharmacokinetics with different modes of administration and to optimize delivery. Copyright .COPYRGT. Association for Research in Vision and Ophthalmology.

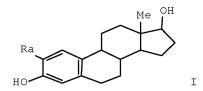
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ACCESSION NUMBER:
                         2004:905611 CAPLUS Full-text
DOCUMENT NUMBER:
                         141:361102
TITLE:
                         Compounds and methods for the use of estrogens as
                         anti-mitotic agents to inhibit
                         neovascularization in eye
                         diseases
INVENTOR(S):
                         D'Amato, Robert J.; Folkman, M.
                         Judah
PATENT ASSIGNEE(S):
                         USA
SOURCE:
                         U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of
                         U.S. Ser. No. 77,142.
                         CODEN: USXXCO
DOCUMENT TYPE:
                         Patent
LANGUAGE:
                         English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:
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L51 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 1

	PATENT NO.							DATE									
1 1 -	US US EP		148 '4 '9	307		A1 20041028 A 19960402		20041028 19960402 20060329	US 1993-102767 EP 2005-16659						20040227 19930806		
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		192735 192735	9	,		A2 A3		20080604 20080611		2008-	2915				19	940802	
				BE, SE	CH,	DE,	DK,	ES, FR,	GB, G	R, IE,	IT,	LI,	LU,	МС	, 1	NL,	
1	US	566114	:3			Α		19970826	US	1995-	5712	65			199	951212	
		589206				Α		19990406	US	1997-	8386	99				970425	
1	US	652867	6			В1		20030304	US	1999-	2431	58			199	990202	
1	US	200302	364	408		A1		20031225	US	2001-	7806	50			20	010212	
1	US	710918	7			В2		20060919									
1	US	200201	652	212		A1		20021107	US	2002-	7714	2			20	020215	
1	US	690891	. 0			В2		20050621									
1	US	200201	199	959		A1		20020829	US	2002-	8007	6			20	020221	
1	US	672385	8			В2		20040420									
1	US	200300	550)29		A1		20030320	US	2002-	2556	52			20	020925	
1	US	200300	968	300		A1		20030522		2002-					20	021025	
		701207				В2		20060314									
		200301		180		A1		20031016	US	2003-	3799	91			20	030303	
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		693012				В2		20050816									
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		708147				В2		20060725									
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		738184				В2		20080603	0.0			, 0				000023	
		200601		72.7		A1		20060817	US	2006-	4023	86			2.0	060412	
		729161				В2		20071106	0.0						_ ,		
		200812		39		A		20080529	JP	2008-	4170	9			2.0	080222	
		200812				A		20080529	JP	2008- 2008-	4171	1				080222	
		APPLN			•			20000023	IIS	1993-	1027	- 67		Δ1	19	930806	
INION			•	1111	• •											951212	
										1997-						970425	
										1999-						990202	
										2002-						020215	
										1994-						940802	
										2005-						940802	
										1995-						940802	
										1998-						980206	
										1999-						990219	
										1999-						991109	
										2000-						000530	

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US	2001-780650	A1	20010212
US	2002-80076	A1	20020221
US	2003-617150	A1	20030710
US	2004-918627	A1	20040812

GΙ



AB A method of inhibiting neovascularization in a mammal comprises administering to the mammal a neovascularization-inhibiting amount of an estrogenic compound of the formula (I):.

L51 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2003:133428 CAPLUS <u>Full-text</u>

DOCUMENT NUMBER: 138:170084

TITLE: Preparation and anti-tumor activity of nitrogen-substituted thalidomide analogs

INVENTOR(S): Shah, Jamshed H.; Conner, Barry P.; Swartz, Glenn

M., Jr.; Hunsucker, Kimberly A.; Rougas, John;

D'Amato, Robert; Pribluda, Victor;

Treston, Anthony

PATENT ASSIGNEE(S): The Children's Medical Center Corporation, USA;

Entremed, Inc.

SOURCE: PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

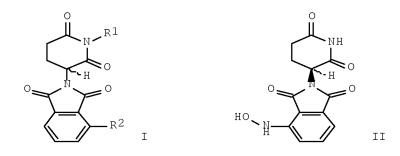
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.					KIND DATE				APPL	DATE							
	20030				A2 A3		2003 2003		,	WO 2	002-	US25	112		20020806		
WO	W:	AE,	AG,	•	AM,	AT,	AU, DE,	AZ,		•		•	•	•	•	•	
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	
							LU, PT,			•				•		•	
	RW:	•		•	•		UA, MZ,	•		•		•	•	•		AZ,	

BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG CA 2457319 20030220 CA 2002-2457319 20020806 Α1 AU 2002323063 20030224 AU 2002-323063 20020806 Α1 AU 2002323063 В2 20071108 US 20030139451 Α1 20030724 US 2002-213294 20020806 US 7153867 В2 20061226 20040602 EP 1423115 Α2 EP 2002-757019 20020806 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK 20041224 Τ JP 2003-519445 JP 2004538322 20020806 NZ 531294 20051125 NZ 2002-531294 Α 20020806 ZA 2004000924 20060426 ZA 2004-924 20040204 Α US 20070105903 US 2006-513291 A1 20070510 20060829 PRIORITY APPLN. INFO.: US 2001-310261P P 20010806 US 2002-213294 A3 20020806 WO 2002-US25112 W 20020806

OTHER SOURCE(S): MARPAT 138:170084



Title compds. I [R1 = H, OH, CH3, CH2OZ, etc.; R2 = NHNH2, NHOH, NHOR3; R3 = pyrazolidine, pyrazoline, etc.; Z = H, alkyl and related analogs] are prepared For instance, N-CBz-L-glutamine was converted to the corresponding imide (THF, CDI) and deprotected (HOAc, HBr) to the corresponding amine•HBr. This intermediate was reacted with 3-nitrophthalic anhydride (DMF, HOAc, 70-80°, 18 h) and converted to II (Dioxane, H2NNH2, 10%Pd-C). I are angiogenesis inhibitors and can be administered orally.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2003:261008 CAPLUS Full-text

DOCUMENT NUMBER: 138:281097

TITLE: Angiostatin fragments and method of use INVENTOR(S): Folkman, M. Judah; O'Reilly, Michael S.;

Cao, Yihai; Sim, Kim Lee

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 96 pp., Cont.-in-part of

U.S. Ser. No. 335,325.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	
US 20030064926	A1	20030403	US 2002-127066	20020422
US 5639725	A	19970617	US 1994-248629	19940426
US 5792845	A	19980811	US 1994-326785	19941020
US 5885795	A	19990323	US 1995-429743	19950426
US 5837682			US 1996-612788	
US 5945403			US 1997-866735	
US 6024688				
US 20020164717			US 1999-335325	19990617
US 6521439				
US 20020037847	A1		US 2001-761120 US 2001-788142	20010116
US 20010029246 US 20040002459	A1		US 2001-788142	20010216
	AΙ	20040101	US 2003-402364 US 1994-248629	20030328
PRIORITY APPLN. INFO.:			US 1994-248629	AZ 19940426
			US 1994-326785	A2 19941020
			US 1995-429743	A2 19950426
			US 1996-612788	A3 19960308
			US 1997-866735	A3 19970530
			US 1998-66028	A3 19980424
			US 1999-309821	B1 19990511
			US 1999-335325	A1 19990617
			US 1999-338387	B1 19990622
			US 2001-788142	A2 20010216
			US 2001-761120	B1 20010116

AB Fragments of an endothelial cell proliferation inhibitor and method of use therefor are provided. The endothelial proliferation inhibitor is a protein derived from plasminogen, or more specifically is an angiostatin fragment. The angiostatin fragments generally correspond to kringle structures occurring within the endothelial cell proliferation inhibitor. The endothelial cell inhibiting activity of these fragments provides a means for inhibiting angiogenesis of tumors and for treating angiogenic-mediated disease. Angiostatin was cloned in Pichia pastoris and purified from fermentation broth by lysine-Sepharose 4B. The purified recombinant angiostatin inhibited the bFGF-driven proliferation of bovine endothelial cells in vitro in a dose dependent manner and suppressed metastases of Lewis lung carcinoma in mice.

L51 ANSWER 8 OF 20 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

ACCESSION NUMBER: 2003:572618 BIOSIS Full-text

DOCUMENT NUMBER: PREV200300570963

TITLE: A SUBCONJUNCTIVAL IMPLANT FOR DELIVERY OF CYTOCHALASIN

E IN A MODEL OF CHOROIDAL NEOVASCULARIZATION: A PILOT

STUDY.

AUTHOR(S): Kim, H. [Reprint Author]; D'Amato, R. J.;

Lutz, R. J. [Reprint Author]; Yuan, P.; Baffi, J.;

Wolfe, J. D.; Byrnes, G.; Robinson, M. R.; Csaky, K. G.

CORPORATE SOURCE: Division of Bioengineering and Physical Sciences,

> National Institutes of Health, Bethesda, MD, USA ARVO Annual Meeting Abstract Search and Program

SOURCE:

Planner, (2003) Vol. 2003, pp. Abstract No. 4429.

Meeting Info.: Annual Meeting of the Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, USA. May 04-08, 2003. Association for Research in

Vision and Ophthalmology.

Conference; (Meeting) DOCUMENT TYPE:

Conference; (Meeting Poster)

Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 10 Dec 2003

Last Updated on STN: 10 Dec 2003

AΒ Purpose: Cytochalasin E (Cyto E), an epoxide containing a fungal-derived metabolite, exhibits antiangiogenic activity in vitro and in vivo. The goal of this study was to evaluate the in vitro release rates and efficacy of a Cyto E subconjunctival implant in a rat model of choroidal neovascularization (CNV). Methods: Implants were fabricated using a compressed 2 mm diameter Cyto E pellet coated with uncured 10% (w/v) polyvinylalcohol, a non-reactive biocompatable polymer. In vitro release rates were determined by placing the implants in PBS and measuring the drug concentrations over time by HPLC every 24-72 hours, each time replacing the PBS to simulate sink conditions. Implants were inserted into the subconjunctival space of Brown Norway rats at the same time that an adenoviral vector expressing vascular endothelial growth factor 165 (Ad-VEGF 165) was injected into the subretinal space to stimulate CNV production. The animals were sacrificed at 2 and 3 weeks postimplantation and the eyes were evaluated for the presence of CNV using a FITCdextran perfusion/flat mount quantitation method. Results: The in vitro release rates showed an initial Cyto E release of 9.8 +- 3.0 ug/day over the initial 4 days followed by a relatively constant release of 4.7 +- 0.8 ug/daybetween days 5 and 28. Six rats received subconjunctival Cyto E implant and six rats received a sham implant (no drug). Clinically, the implants appeared to be well tolerated and no implant extrusions were noted. No significant quantifiable CNV was not present at 2 weeks in either the Cyto E or sham implant group. However, at 3 weeks, 1/3 eyes with a Cyto E implant showed measurable CNV whereas; 3/3 eyes with a sham implant showed CNV. Conclusions: Sustained-release Cyto E subconjunctival implants can be fabricated for delivery of drug into the posterior pole with relatively steady release over the time course of the CNV model (3 weeks). The rat eyes receiving Cyto E implants showed less production of CNV at 3 weeks compared with the sham group. Efficacy studies are ongoing to further evaluate the potential of Cyto E to treat CNV.

L51 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2002:637473 CAPLUS Full-text

DOCUMENT NUMBER: 137:185418

TITLE: Enantioselective preparation of

3-aminothalidomides for the treatment of diseases

that are mediated by abnormal mitosis and/or

angiogenesis

INVENTOR(S): Treston, Anthony; Shah, Jamshed H.; D'Amato,

Robert J.; Hunsucker, Kimberly A.; Rougas,

John; Conner, Barry P.; Pribluda, Victor; Swartz,

Glenn M.

PATENT ASSIGNEE(S): The Children's Medical Center Corporation, USA

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

					KIND DATE				APPLICATION NO.						DATE		
WO	2002	0640	83		A2		2002	0822	WO 2001-US45229								
WO	2002						2003			D.D.	ъ.	D.D.	D.1.	D.F.	~ 3	011	
	W:	•	•		•						•					, CH,	
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EP	1353	672			A2		2003	1022		EP 2	001-	2701	17			20011130)
EP	1353	672			В1		2007	1003									
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		PT,	IE,	SI,	LT,	LV,	FΙ,										
JP	2004	5367	84		Τ		2004	1209		JP 2	002-	5638	80			20011130)
AT	3746	09			Τ		2007	1015		AT 2	001-	2701	17			20011130)
ES	2004 3746 2290 5266 2003	091			Т3		2004 2007 2008 2008	0216		ES 2	001-	2701	17			20011130)
NZ	5266	83			Α		2008	0328		NZ 2	001-	5266	83			20011130)
MX	2003	PA04	699		Α		2005	0125		MX 2	003-	PA46	99			20030528	3
US	2004	0147	558		A1		2004	0729		US 2	004-	4333	80			20040311	L
HK	1061	354			A1		2008			HK 2	004-	1027	62			20040420)
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US	2008	0306	113		A1		2008	1211		US 2	008-	1487	95			20080422	
PRIORIT	Y APP	LN.	INFO	.:						US 2	000-	2502	19P		P	20001130)
										AU 2	002-	2537	95		A3	20011130)
										WO 2	001-	US45	229		W	20011130)
										US 2	004-	4333	80		A1	20040311	L

GΙ

AB Title compds. I [X = CH, (R)-enantiomer, (S)-enantiomer, (R,S) racemate] and their formulations were prepared For example, condensation of (3S)-aminoglutarimide, e.g., prepared from N-CBZ-L-glutamine in 2 steps, and 3-nitrophthalic anhydride provided nitrothalidomide II [X = CH, (S)-enantiomer], followed by nitro reduction afforded claimed aminothalidomide I [X = CH, (S)-enantiomer]. In vivo expts. in lung and plasma cell tumor metastatic tumor systems comparing the antitumor activity of the three enantiomeric prepns. of I, demonstrated the S-enantiomer to be the most active enantiomer in each tumor model. Compds. I are useful for the treatment of angiogenesis-associated diseases, e.g., cancer and macular degeneration.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2004:369251 CAPLUS <u>Full-text</u>

DOCUMENT NUMBER: 140:332502

TITLE: Methods and compositions for inhibition of angiogenesis using thalidomide and

related compounds

INVENTOR(S): D'Amato, Robert

PATENT ASSIGNEE(S): The Children's Medical Center Corporation, USA

SOURCE: Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PA	PATENT NO.					KIND DATE			APPLICATION NO.							DATE		
	1245				A2 20021002 A3 20040506				EP	2002	2-1	228	0		19940224			
EP	1245 R:		BE,	CH,	A3 DE,				GB,	GF	R, II	Γ,	LI,	LU,	NL,	SE	E, MC,	
		PT,	ΙE															
US	5629	327			A		1997	0513		US	1993	3-1	688	17			19931215	
EP	6882	11			A1		1995	1227		ΕP	1994	4-9	097	73			19940224	
EP	6882	11			В1		2002	0612										
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GF	R, IE	Ξ,	ΙΤ,	LI,	LU,	MC	C, NL,	
		PT,	SE															
US	2001	0056	114		A1		2001	1227		US	2001	1-8	993	44			20010705	
PRIORIT	Y APP	LN.	INFO	.:						US	1993	3-2	504	6		A	19930301	
										US	1993	3-1	688	17		A	19931215	
										EP	1994	4-9	097	73		АЗ	19940224	

WO 1994-US1971 W 19940224

US 1997-950673 A3 19971016

US 2000-704054 A3 20001101

OTHER SOURCE(S): MARPAT 140:332502

The present invention comprises a group of compds. that effectively inhibit angiogenesis. More specifically, thalidomide and various related compds. such as thalidomide precursors, analogs, metabolites and hydrolysis products have been shown to inhibit angiogenesis. Importantly, these compds. can be administered orally.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L51 ANSWER 11 OF 20 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation

on STN

ACCESSION NUMBER: 2002:475378 BIOSIS Full-text

DOCUMENT NUMBER: PREV200200475378

TITLE: Amino derivatives of EM-138 and methods of

treating angiogenesis with same.

AUTHOR(S): D'Amato, Robert [Inventor]

CORPORATE SOURCE: ASSIGNEE: The Children's Medical Center Corporation

PATENT INFORMATION: US 6420414 20020716

SOURCE: Official Gazette of the United States Patent and

Trademark Office Patents, (July 16, 2002) Vol. 1260, No. 3. http://www.uspto.gov/web/menu/patdata.html.

e-file.

CODEN: OGUPE7. ISSN: 0098-1133.

DOCUMENT TYPE: Patent LANGUAGE: English

ENTRY DATE: Entered STN: 11 Sep 2002

Last Updated on STN: 11 Sep 2002

AB The present invention comprises a group of compounds that effectively inhibit angiogenesis. More specifically, thalidomide and various related compounds such as thalidomide precursors, analogs, metabolites and hydrolysis products have been shown to inhibit angiogenesis and to treat disease states resulting from angiogenesis. Importantly, these compounds can be administered orally.

L51 ANSWER 12 OF 20 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

ACCESSION NUMBER: 2001-487780 [53] WPIX

CROSS REFERENCE: 1994-302651; 1997-099505; 2001-535431; 2003-831016;

2005-080215

DOC. NO. CPI: C2001-146342 [53]

TITLE: Treatment of angiogenesis

-associated eye conditions, especially

macular degeneration, comprises administering

2-(2,3-dihydro-1-oxo-1H-isoindol-2-yl)glutaric acid

DERWENT CLASS: B02

INVENTOR: D'AMATO R J; GREEN S J; MADSEN J; SHAH J H;

SWARTZ G M

PATENT ASSIGNEE: (CHIL-N) CHILDRENS MEDICAL CENT

COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO KIND DATE WEEK LA PG MAIN IPC

US 6228879 B1 20010508 (200153)* EN 31[13]

APPLICATION DETAILS:

PATE	ON TK	KIND	API	PLICATION	DATE
US 62	228879 E	31 CIP of	US	1997-950673	19971016
US 62	228879 E	31 Provisional	US	1998-79422P	19980326
US 62	228879 E	31	US	1999-277402	19990326

FILING DETAILS:

PATENT NO	KIND	PATENT NO					
US 6228879 B1	CIP of	US 6071948 A					
PRIORITY APPLN. INFO:	US 1999-277402 US 1997-950673 US 1998-79422P	19990326 19971016 19980326					

AN 2001-487780 [53] WPIX

CR 1994-302651; 1997-099505; 2001-535431; 2003-831016; 2005-080215

AB US 6228879 B1 UPAB: 20050902

NOVELTY - Treatment of angiogenesis-associated eye conditions in humans or animals comprises administering EM-138 (2-(2,3-dihydro-1-oxo-1H-isoindol-2-yl)glutaric acid).

DETAILED DESCRIPTION - Treatment of angiogenesis-associated eye conditions in humans or animals comprises administering EM-138 of formula (I): ACTIVITY - Ophthalmological.

MECHANISM OF ACTION - Angiogenesis inhibitor .

A rabbit cornea angiogenesis assay is described but no results are given for ${\rm EM-}138$.

USE - The method is useful for treating macular degeneration (especially agerelated) as well as other diseases associated with corneal, retinal or choroidal neovascularization, e.g. diabetic retinopathy, corneal graft rejection, neovascular glaucoma and retrolental fibroplasia.

L51 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2001:302384 CAPLUS Full-text

DOCUMENT NUMBER: 134:361784

TITLE: Comparative evaluation of the antitumor activity

of antiangiogenic proteins delivered by gene

transfer

AUTHOR(S): Kuo, Calvin J.; Farnebo, Filip; Yu, Evan Y.;

Christofferson, Rolf; Swearingen, Rebecca A.; Carter, Robert; Von Recum, Horst A.; Yuan, Jenny;

Kamihara, Junne; Flynn, Evelyn; D'Amato, Robert; Folkman, Judah; Mulligan, Richard C. Department of Genetics, Harvard Medical School,

Division of Molecular Medicine, Children's

Hospital, Boston, MA, 02115, USA

SOURCE: Proceedings of the National Academy of Sciences of

the United States of America (2001), 98(8),

4605-4610

CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal LANGUAGE: English

CORPORATE SOURCE:

AΒ Although the systemic administration of a number of different gene products has been shown to result in the inhibition of angiogenesis and tumor growth in different animal tumor models, the relative potency of those gene products has not been studied rigorously. To address this issue, recombinant adenoviruses encoding angiostatin, endostatin, and the ligand-binding ectodomains of the vascular endothelial growth factor receptors Flk1, Flt1, and neuropilin were generated and used to systemically deliver the different gene products in several different preexisting murine tumor models. Single i.v. injections of viruses encoding soluble forms of Flk1 or Flt1 resulted in ≈80% inhibition of preexisting tumor growth in murine models involving both murine (Lewis lung carcinoma, T241 fibrosarcoma) and human (BxPC3 pancreatic carcinoma) tumors. In contrast, adenoviruses encoding angiostatin, endostatin, or neuropilin were significantly less effective. A strong correlation was observed between the effects of the different viruses on tumor growth and the activity of the viruses in the inhibition of corneal micropocket angiogenesis. These data underscore the need for comparative analyses of different therapeutic approaches that target tumor angiogenesis and provide a rationale for the selection of specific antiangiogenic gene products as lead candidates for use in gene therapy approaches aimed at the treatment of malignant and ocular disorders.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 14 OF 20 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:319947 BIOSIS Full-text

DOCUMENT NUMBER: PREV200100319947

TITLE: Results of the age-related macular degeneration and

thalidomide study (AMDATS).

AUTHOR(S): Maguire, M. G. [Reprint author]; Fine, S. L. [Reprint

author]; Maguire, A. M. [Reprint author]; D'Amato,

R. J.; Singerman, L. J.; AMDATS Research Group

CORPORATE SOURCE: Ophthalmology, University of PA, Philadelphia, PA, USA

SOURCE: IOVS, (March 15, 2001) Vol. 42, No. 4, pp. S233. print.

Meeting Info.: Annual Meeting of the Association for Research in Vision and Ophthalmology. Fort Lauderdale,

Florida, USA. April 29-May 04, 2001.

DOCUMENT TYPE: Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 4 Jul 2001

Last Updated on STN: 19 Feb 2002

L51 ANSWER 15 OF 20 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

ACCESSION NUMBER: 2000-116273 [10] WPIX

CROSS REFERENCE: 2000-062614

DOC. NO. CPI: C2008-426356 [79]

TITLE: Novel compound for treating

angiogenesis-associated diseases, various

cancers, tumors and eye diseases

DERWENT CLASS: A26; A35; A85; B02; E16; E17; E36; G04; L03; P43; V05

INVENTOR: D'AMATO & J; FOGLER W; FOGLER W E; GREEN S

J; MADSEN J; MADSEN J W; PAPATHANASSIU A E; SHAH J H;

SWARTZ G M; DAMATO R J

PATENT ASSIGNEE: (CHIL-N) CHILDRENS MEDICAL CENT; (CHIL-N) CHILDRENS

MEDICAL CORP; (ENTR-N) ENTREMED INC

COUNTRY COUNT: 85

PATENT INFO ABBR.:

PAT	TENT NO	KINI	D DATE	WEEK	LA	PG	MAIN IPC
WO	9958096	A2	 19991118	(200010)*	EN	64[0]	
AU	9941837	A	19991129	(200018)	ΕN		
EP	1091726	A2	20010418	(200123)	ΕN		
KR	2001052332	Α	20010625	(200173)	KO		
JP	2002514578	W	20020521	(200236)	JA	56	
AU	749356	В	20020627	(200254)	EN		
US	6673828	В1	20040106	(200411)	EN		
US	20040127545	A1	20040701	(200444)	EN		
US	7112602	В2	20060926	(200663)	EN		
KR	699968	В1	20070328	(200820)	KO		
CA	2331461	С	20081007	(200868)	EN		

APPLICATION DETAILS:

PATEN'	T NO KIND	API	PLICATION	DATE
WO 99	 58096 A2	WO	1999-US1028	7 19990511
	73828 B1 Provisional			
US 20	040127545 A1 Provisional	US	1998-85037P	19980511
	12602 B2 Provisional	US	1998-85037P	19980511
US 66	73828 B1 Provisional	US	1998-97384P	19980821
US 20	040127545 Al Provisional	US	1998-97384P	19980821
US 71	12602 B2 Provisional	US	1998-97384P	19980821
US 66	73828 B1 Provisional	US	1998-108037	9 19981112
US 20	040127545 Al Provisional	US	1998-108037	9 19981112
US 71	12602 B2 Provisional	US	1998-108037	9 19981112
AU 99	41837 A	AU	1999-41837	19990511
AU 74	9356 B	AU	1999-41837	19990511
EP 10	91726 A2	ΕP	1999-925585	19990511
US 66	73828 B1	US	1999-309464	19990511
US 20	040127545 A1 Div Ex	US	1999-309464	19990511
US 71	12602 B2 Div Ex	US	1999-309464	19990511
JP 20	02514578 W	JΡ	2000-547948	19990511
KR 20	01052332 A	KR	2000-712550	20001109
KR 69	9968 B1	KR	2000-712550	20001109
US 20	040127545 A1	US	2003-732867	20031209
US 71	12602 B2	US	2003-732867	20031209
CA 23	31461 C	CA	1999-233146	1 19990511
EP 10	91726 A2 PCT Application	WO	1999-US1028	7 19990511
KR 20	01052332 A PCT Application	WO	1999-US1028	7 19990511
JP 20	02514578 W PCT Application	WO	1999-US1028	7 19990511
	9968 B1 PCT Application			
CA 23	31461 C PCT Application	WO	1999-US1028	7 19990511

FILING DETAILS:

PATENT NO	KIND		PATENT NO						
AU 749356	 В	Previous Publ	AU 9941837 A						
KR 699968	B1	Previous Publ	KR 2001052332 A						
US 20040127545	A1	Div ex	US 6673828 B						
US 7112602	B2	Div ex	US 6673828 B						
AU 9941837	A	Based on	WO 9958096 A						
EP 1091726	A2	Based on	WO 9958096 A						
JP 2002514578	W	Based on	WO 9958096 A						
AU 749356	В	Based on	WO 9958096 A						
KR 699968	В1	Based on	WO 9958096 A						

CA 2331461 С Based on WO 9958096 PRIORITY APPLN. INFO: US 1998-108037P 19981112 US 1998-85037P 19980511 US 1998-97384P 19980821 US 1999-309464 19990511 US 2003-732867 20031209 2000-116273 [10] WPIX ΑN CR 2000-062614 WO 1999058096 A2 UPAB: 20050705 AΒ

NOVELTY - 2-methyl-2-phthalimidinoglutaric acid (1) is new.

DETAILED DESCRIPTION - 2-methyl-2-phthalimidinoglutaric acid of formula I is new.

INDEPENDENT CLAIMS are also included for the following: (1) new (R) and (S) enantiomers of DL-2-methyl-2-phthalimidinoglutaric acid (2,3); (2) a process for separation of (S) and (R) enantiomers of DL-2-methyl-2phthalimidinoglutaric acid, the process comprises placing a solution of DL-2methyl-2-phthalimidinoglutaric acid on a chiral high pressure liquid chromatography (HPLC) column and separately eluting R-(+)-2-methyl-2phthalimidinoglutaric acid and S-(-)-2-methyl-2-phthalimidinoglutaric acid;(3) a process for the separation of the (S) and (R) enantiomers of DL-2methyl-2-phthalimidinoglutaric acid, comprising forming a diester of DL-2methyl-2-phthalimidinoqlutaric acid, separating the diester enantiomers with an enantiomerically-specific hydrolysis agent, separating the hydrolyzed products on a silica gel column, and completely hydrolyzing the individual enantiomers to form R-(+)-2-methyl-2-phthalimidinoqlutaric acid and <math>S-(-)-2methyl-2-phthalimidinoglutaric acid; and (4) a pharmaceutical composition containing a compound chosen from DL-2-methyl-2-phthalimidinoglutaric acid, R-(+) -2-methyl-2-phthalimidinoglutaric acid and/or S-(-)-2-methyl-2phthalimidinoglutaric acid. ACTIVITY - Cytostatic; anti-tumor; antiangiogenic; ophthalmological; anti-inflammatory; antirheumatic; antiarthritic; osteopathic; antipsoriatic; antiarteriosclerotic; antifungal; virucide; antiulcer; antimicrobial; immunosuppressive; dermatological; antisickling; antianemic. B16-BL6 melanoma cells (5x10 to the power4) were injected intravenously into tail veins of C57B1/6 mice. 3 days later, a treatment with 0.8 mmol/kg of 2-phthalimidinoglutaric acid (EM-138) was given. 14 days after tumor cell inoculation, the lungs were removed from mice and surface pulmonary metastases were counted. The metastases were considerably reduced for groups of mice that received 5-11 treatments. The treatment was found to be more effective when it was initiated one day after tumor cell inoculation than 2-7days later.

MECHANISM OF ACTION - Angiogenesis inhibiting; Metastasis inhibiting. B16-BL6 melanoma cells (5x10 to the power4) were injected intravenously into the tail veins of C57B1/6 mice. 3 days later, the mice were treated orally with increasing doses of thalidomide or 2-phthalimidinoglutaric acid (EM-138) on alternate days. 14 days after tumor cell inoculation, the lungs were removed from mice and surface pulmonary metastases were counted. The lung metastases were found to be reduced considerably on administration of EM-138 where as it remained the same on administration of thalidomide.

USE - For treatment of various cancers, and angiogenesis-associated diseases such as diabetic retinopathy, premature retinopathy, corneal graph rejection, neovascular glaucoma, retrolental fibroplasia, epidemic keratoconjunctivitis, vitamin A deficiency, contact lens overwear, atopic keratitis, superior limbic keratitis, pterygium keratitis sicca, sjogren's syndrome, acne rosacea, phylectenulosis, syphilis, micobacteria infections, lipid degeneration, chemical burns, bacterial ulcers, fungal ulcers, herpes simplex infections, herpes zoster infections, protozoan infections, Kaposi's sarcoma, Mooren's ulcer, Terrien's marginal degeneration, marginal keratolysis, trauma, rheumatoid arthritis, systemic lupus erythematosis, polyarteritis, Wegener's sarcoidosis, scleritis, Stevens-Johnson disease, radial keratotomy, macular

degeneration, sickle cell anemia, sarcoid, pseudoxanthoma elasticum, Paget's disease, vein occlusion, artery occlusion, carotid obstructive disease, chronic uveitis, chronic vitritis, Lyme's disease, Eales' disease, Behcet's disease, infections causing retinitis or choroiditis, presumed ocular histoplasmosis, Best's disease, myopia, optic pits, Stargardt's disease, pars planitis, chronic retinal detachment, hyperviscosity syndromes, toxoplasmosis, post-laser complications, rubeosis, abnormal proliferation of fibrovascular or fibrous tissue, proliferative vitreoretinopathy, Bartonellosis, hemangiomas, Osler-Weber-Rendu disease, solid tumors, blood-borne tumors, acquired immune deficiency syndrome, ocular neovascular disease, age-related macular degeneration osteoarthritis, gliomas, diseases caused by chronic inflammation, Crohn's disease, ulceritive colitis, tumors of rhabdomyosarcoma, tumors of retinblastoma, tumors of Ewing's sarcoma, tumors of neuroblastoma, tumors of osteosarcoma, leukemia, psoriasis, atherosclerosis, acoustic neuroma, neurofibroma, trachoma, pyogenic granulomas, and pemphigoid (all claimed) in a human or animal. The compounds (1,2,3) are also used for controlling wound healing, to induce amenorrhea and to induce abortion (claimed). ADVANTAGE - The new EM-138 compounds are stable and unlike thalidomide, are relatively resistant to hydrolysis. The compounds are potent inhibitors of metastases and even a single dose is capable of inhibiting metastasis by 50 %, and a dose of 0.8 mmol/kg/day has been shown to inhibit metastasis by greater than 90 %. The compounds have considerably greater inhibitory activity than thalidomide.

L51 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1998:341491 CAPLUS Full-text

DOCUMENT NUMBER: 129:12742
ORIGINAL REFERENCE NO.: 129:2639a,2642a

TITLE: Methods and compositions using thalidomide or

other angiogenesis-inhibitory

compound and anti-inflammatory agent for

inhibition of angiogenesis

INVENTOR(S): D'Amato, Robert J.

PATENT ASSIGNEE(S): Children's Medical Center, USA

SOURCE: PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA:	PATENT NO.					KIND DATE				APPL	ICAT		DATE			
	9819					A2 19980514 A3 19980625			,	WO 1	997-		19971104			
WO	9819	649			A3		1998	0625								
	W:	AL,	ΑM,	ΑT,	ΑU,	ΑZ,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CU,	CZ,	DE,
		DK,	EE,	ES,	FΙ,	GB,	GE,	GH,	HU,	ID,	IL,	IS,	JP,	KE,	KG,	KP,
		KR,	KΖ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MD,	MG,	MN,	MW,	MX,	NO,
		NZ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	ΤJ,	TM,	TR,	TT,
		UA,	UG,	UZ,	VN,	YU,	ZW									
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		FR,	GB,	GR,	IE,	ΙT,	LU,	MC,	NL,	PT,	SE,	BF,	ВJ,	CF,	CG,	CI,
		CM,	GA,	GN,	ML,	MR,	ΝE,	SN,	TD,	ΤG						
CA	2270	887			A1		1998	0514	1	CA 1	997-	2270	887		1:	9971104
CA	2270	887			С		2006	0321								
CA 2514681 A1 19980514 CA 1997-2514681										19971104						
ΑU	9851	973			A		1998	0529		AU 1	998-	5197.	3		1:	9971104
ΑU	7467	13			В2		2002	0502								
EP	9632	00			A2		1999	1215		EP 1	997-	9468	84		1	9971104

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EP 963200
                           В1
                                  20050928
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
             PT, IE, FI
     NZ 336035
                                 20020328 NZ 1997-336035
                                                                       19971104
                           Α
     JP 2002513391
                         T 20020508 JP 1998-521728
T 20051015 AT 1997-946884
A2 20051019 EP 2005-14759
                                                                        19971104
     AT 305301
                                                                       19971104
     EP 1586322
                                                                       19971104
     EP 1586322
                          A3 20051026
                          B1 20080820
     EP 1586322
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
             PT, IE, SI, LT, LV, FI, RO, MK, AL
                           T3 20060601 ES 1997-946884
     ES 2253787
                                20080514 EP 2007-121971
     EP 1920773
                           A1
                                                                       19971104
         R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC,
             NL, PT, SE
     AT 405268
                                  20080915
                                             AT 2005-14759
                                                                        19971104
     HK 1028874
                          A1 20060512
                                             HK 2000-103555
                                                                       20000614
     AU 780296
     AU 780296 B2 20050317 AU 2002-23191 US 20030191098 A1 20031009 US 2003-340554 US 20040248820 A1 20041209 US 2003-430892 AU 2005202596 A1 20050714 AU 2005-202596 US 20070049566 A1 20070301 US 2006-411230 US 7435745 B2 20081014
                                                                       20020308
                                                                       20030110
                                                                        20030505
                                                                       20050615
                                                                       20060426
                                              US 1996-28708P P 19961105
PRIORITY APPLN. INFO.:
                                               US 1997-963058 A 19971103
                                               US 1996-28707P P 19961105
                                               AU 1998-51973
                                                                   A3 19971104
                                               CA 1997-2270887
                                                                   A3 19971104
                                               EP 1997-946884
                                                                   A3 19971104
                                               EP 2005-14759
                                                                   A3 19971104
                                               WO 1997-US20116
                                                                  W 19971104
                                               US 1999-287377 A1 19990407
                                               US 2000-480448 B1 20000110
                                               AU 2002-23191 A 20020308
```

OTHER SOURCE(S): MARPAT 129:12742

AB A group of compds. that effectively inhibit angiogenesis is provided. More specifically, thalidomide and various related compds.,e.g. thalidomide precursors, analogs, metabolites and hydrolysis products, have been shown to inhibit angiogenesis and to treat disease states resulting from angiogenesis. Addnl., antiinflammatory drugs, such as steroids and NSAIDs can inhibit angiogenesis—dependent diseases either alone or in combination with thalidomide and related compds. Importantly, these compds. can be administered orally.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 17 OF 20 PASCAL COPYRIGHT 2009 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1997-0456133 PASCAL Full-text

COPYRIGHT NOTICE: Copyright .COPYRGT. 1997 INIST-CNRS. All rights

reserved.

TITLE (IN ENGLISH): Effects of thalidomide and related metabolites in

a mouse corneal model of neovascularization

AUTHOR: KENYON B. M.; BROWNE F.; D'AMATO R. J.

CORPORATE SOURCE: Department of Surgery, Children's Hospital,

Harvard Medical School, Boston, MA 02115, United

States

SOURCE: Experimental eye research, (1997), 64(6), 971-978,

refs. 1 p.1/4

ISSN: 0014-4835 CODEN: EXERA6

DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom

LANGUAGE: English

AVAILABILITY: INIST-9444, 354000067662820120

AN 1997-0456133 PASCAL Full-text

CP Copyright .COPYRGT. 1997 INIST-CNRS. All rights reserved.

Thalidomide, when administered orally, is an inhibitor of angiogenesis in the basic fibroblast growth factor (bFGF)-induced rabbit cornea micropocket assay. We now show in the mouse that thalidomide given intraperitoneally but not orally significantly inhibits bFGF-induced and vascular endothelial growth factor (VEGF)-induced corneal neovascularization. We further demonstrate that this inhibition is independent from thalidomide's ability to suppress tumor necrosis factor-alpha (TNF-alpha) production. Experiments examining thalidomide's enantiomers reveal that the S(-)-enantiomer has the strongest antiangiogenic activity in VEGF-induced and bFGF-induced corneal neovascularization. Structure activity studies suggest that thalidomide's anti-angiogenic activity is related to the open ring metabolites resulting from hydrolysis. Together these data support a correlation between thalidomide's antiangiogenic and teratogenic activities.

L51 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1995:174382 CAPLUS Full-text

DOCUMENT NUMBER: 122:151376

ORIGINAL REFERENCE NO.: 122:27765a,27768a

TITLE: Thalidomide compounds in methods and compositions

for inhibition of angiogenesis

INVENTOR(S): D. Amato, Robert

PATENT ASSIGNEE(S): Children's Hospital Medical Center, USA

SOURCE: PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PATENT NO.			KIN	KIND DATE		APPLICATION NO.						DATE				
						_										
WO	9420	085			A1		1994	0915	,	WO 1	994-	US19	71		19	9940224
	W:	ΑT,	ΑU,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CZ,	DE,	DK,	ES,	FI,	GB,
		HU,	JP,	KP,	KR,	KΖ,	LK,	LU,	LV,	MG,	MN,	MW,	NL,	NO,	NΖ,	PL,
		PT,	RO,	RU,	SD,	SE,	SK,	UA,	UZ,	VN						
	RW:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IE,	ΙΤ,	LU,	MC,	NL,	PT,
		SE,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	ML,	MR,	NE,	SN,	TD,	TG
US	5629	327			А		1997	0513		US 1	993-	1688	17		1	9931215
CA	2157	288			A1		1994	0915	1	CA 1	994-	2157.	288		19	9940224
CA	2157	288			С		2005	1108								

AU	9462	486			Α	1994	0926	А	U	1994-	6248	6			19	940224
AU	6767	22			В2	1997	0320									
EP	6882	11			A1	1995	1227	Ε	Ρ	1994-	9097	73			19	940224
EP	6882	11			В1	2002	0612									
	R:	ΑT,	BE,	CH,	DE,	DK, ES,	FR,	GB,	GR	IE,	ΙΤ,	LI,	LU,	MO	·	NL,
		PT,	SE													
JP	0850	7767			${ m T}$	1996	0820	J	Ρ	1994-	5200	46			19	940224
AT	2188	65			${ m T}$	2002	0615	A	Τ	1994-	9097	73			19	940224
US	2001	0056	114		A1	2001	1227	U	S	2001-	8993	44			20	010705
PRIORIT	Y APP	LN.	INFO	. :				U	S	1993-	2504	6		A	19	930301
								U	S	1993-	1688	17		A	19	931215
								W	0	1994-	US19	71		W	19	940224
								U	S	1997-	9506	73		А3	19	971016
								U	S	2000-	7040	54		А3	20	001101

OTHER SOURCE(S): MARPAT 122:151376

The present invention comprises a group of compds. that effectively inhibit angiogenesis. More specifically, thalidomide and various related compds. such as thalidomide precursors, analogs, metabolites and hydrolysis products have been shown to inhibit angiogenesis. Importantly, these compds. can be administered orally. EM-12 was tested in the rabbit cornea angiogenesis assay at 100 and 200mg/kg/day and showed 21% and 43% inhibition, resp.

L51 ANSWER 19 OF 20 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

ACCESSION NUMBER: 1991-101508 [14] WPIX CROSS REFERENCE: 1984-190442; 1991-072931 DOC. NO. CPI: C1991-043520 [21]

TITLE: Inhibition of angiogenesis, especially

in solid tumours - using heparin or its derivs. or

analogues and particular steroid cpds. such as

cortisone

B01; B04 DERWENT CLASS:

FOLKMAN M J; LANGER R S; TAYLOR S INVENTOR:

(CHIL-N) CHILDRENS MED CENT PATENT ASSIGNEE:

COUNTRY COUNT:

PATENT INFO ABBR.:

PATENT NO	KINI	DATE	WEEK	LA	PG	MAIN IPC
US 5001116	A	19910319	(199114)*	EN		

APPLICATION DETAILS:

PATENT NO	KIND	API	PLICATION	DATE
US 5001116 A		US	1982-451431	19821220
US 5001116 A		US	1983-559175	19831207
US 5001116 A		US	1984-641305	19840816
US 5001116 A		US	1986-844221	19860324
US 5001116 A		US	1987-80255	19870727
US 5001116 A		US	1989-353213	19890517

PRIORITY APPLN. INFO: US 1989-353213 19890517

AN 1991-101508 [14] WPIX

CR 1984-190442; 1991-072931

AB US 5001116 A UPAB: 20060106

A method of inhibiting angiogenesis in solid tumours in mammals is claimed which comprises administering active agents consisting of (1) a cpd selected from heparin, a heparin fragment which is hexasaccharide or larger oligosaccharide and an analogous cpd of formula (I), (II) or (III) and (2) a cpd selected from steroids having 17-alpha-, 3- and 20-one gps, and in the 16-position H, 0H or Me, and their carboxylates, acetals, ketals and phosphates, the active agents exhibiting an avascular zone when implanted in an immature chick chorioallantoic membrane. The steroid may be eg cortisone, hydrocortisone or 17alpha, 21-dihydroxypregn-4-ene-3; 20-dione. Also claimed is a method of inhibiting angiogenesis in pathologic processes in which angiogenesis is a component in mammals which comprises administering orally the active agents of (A).

USE/ADVANTAGE - The active agents when used to treat tumours inhibit angiogenesis with subsequent regression of large tumour masses and prevention of tumour metastasis. their inhibition of angiogenesis can also be applied to the use of the agents as a contraceptive in females even if first administered after insemination has occurred and in treating diseases involving neovascularisation such as neovascular diseases of the eye and in treating diseases involving angiogenesis such as psoriasis and arthritis. Neither mature non-growing blood vessels nor vascular tissue are affected by the agents.

L51 ANSWER 20 OF 20 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

ACCESSION NUMBER: 1984-190442 [31] WPIX CROSS REFERENCE: 1991-101508; 1991-072931

DOC. NO. CPI: C1984-079963 [21]

TITLE: Inhibition of angiogenesis in

mammals - by admin. of heparin and

cortisone, hydro-cortisone or its 11 alpha-isomer

DERWENT CLASS: B01; B04

INVENTOR: FOLKMAN M J; LANGER R S; TAYLOR S

PATENT ASSIGNEE: (FORK-I) FORKMAN M J; (HARO-C) HARRIS CORP; (HARD-C)

HARVARD COLLEGE

COUNTRY COUNT: 14

PATENT INFO ABBR.:

PATENT NO	KIN	D DATE	WEEK	LA	PG	MAIN	IPC
EP 114589	Α	19840801	(198431)*	EN	26[0]		
AU 8322582	Α	19840628	(198433)	ΕN			
DK 8305844	A	19840806	(198438)	DA			
JP 59176213	Α	19841005	(198446)	JA			
EP 114589	В	19870923	(198738)	EN			
CA 1226816	Α	19870915	(198741)	EN			
DE 3373782	G	19871029	(198744)	DE			
JP 04055171	В	19920902	(199239)	JA	8		
DK 168876	В	19940704	(199428)	DA			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 114589 A		EP 1983-870132	19831219
DK 168876 B		DK 1983-5844 1	9831219
JP 59176213 A		JP 1983-240768	19831220
JP 04055171 B		JP 1983-240768	19831220

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DK 168876 B	Previous Publ	DK 8305844 A
JP 04055171 B	Based on	JP 59176213 A

PRIORITY APPLN. INFO: US 1983-559175 19831207 US 1982-451431 19821220

AN 1984-190442 [31] WPIX

CR 1991-101508; 1991-072931

AB EP 114589 A UPAB: 20060104

Inhibition of angiogenesis in mammals comprises admin. of heparin (I) or a (I) fragment that is a hexasaccharide or larger, together with cortisone (II), hydrocortisone (III) or the 11alpha-isomer of (III).

USE - The inhibition is accompanied by subsequent regression of large tumour masses and prevention of tumour metastasis in animals. Mature non-growing blood vessels and vascular tissue are not affected by the treatment. The treatment also is effective to produce contraception in females, even if first administered after insemination has occurred, and it reduces osteoporosis and is effective against neovascularisation such as neovascular disease of the eye. Psoriasis and arthritis may also be treated. Dose is 27000-45000 units (I)/kg daily orally or 7 mg/kg twice daily subcutaneously of the fragment. (II) acetate subcutaneously at 250-37 mg/kg daily or (III) or its 11alpha-isomer orally at 75 mg/kg daily in drinking water.

Member (0008)

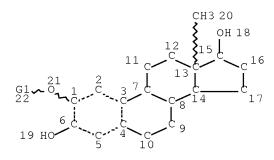
ABEO JP 92055171 B UPAB 20060104

Inhibition of angiogenesis in mammals comprises admin. of heparin (I) or a (I) fragment that is a hexasaccharide or larger, together with cortisone (II), hydrocortisone (III) or the 11alpha-isomer of (III).

USE - The inhibition is accompanied by subsequent regression of large tumour masses and prevention of tumour metastasis in animals. Mature non-growing blood vessels and vascular tissue are not affected by the treatment. The treatment also is effective to produce contraception in females, even if first adminsitered after insemination has occurred, and it reduces osteoporosis and is effective against neovascularisation such as neovascular disease of the dye. Psoriasis and arthritis may also be treated. Dose is 27000-45000 units (I)/kg daily orally or 7 mg/kg twice daily subcutaneously of the fragment. (II) acetate subcutaneously at 250-37 mg/kg daily or (III) or its 11alpha-isomer orally at 75 mg/kg daily in drinking water. (J59176213-A

FILE 'HOME' ENTERED AT 12:41:41 ON 09 JAN 2009

L1 STR



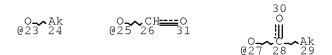
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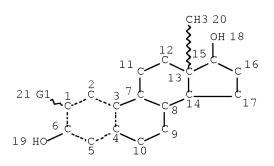
GRAPH ATTRIBUTES: RSPEC I

NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

L2 (269)SEA FILE=REGISTRY SSS FUL L1 L3 STR





VAR G1=OH/23/25/27

NODE ATTRIBUTES:

CONNECT IS X2 RC AT CONNECT IS X2 RC AT 5 CONNECT IS X2 RC AT 9 CONNECT IS X2 RC AT CONNECT IS X2 RC AT 11 CONNECT IS X2 RC AT 12 CONNECT IS X3 RC AT 15 CONNECT IS X2 RC AT CONNECT IS X2 RC AT DEFAULT MLEVEL IS ATOM GGCAT IS LOC AT 24

GGCAT IS LOC AT 29
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE

L4 61 SEA FILE=REGISTRY SUB=L2 SSS FUL L3

L5 44 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND NR=4

L36 STR

VAR G1=OH/23/25/27

NODE ATTRIBUTES:

CONNECT IS X2 RC AT CONNECT IS X2 RC AT CONNECT IS X2 RC AT 9 CONNECT IS X2 RC AT 10 CONNECT IS X2 11 RC AT CONNECT IS X2 RC AT 12 CONNECT IS X3 RC AT CONNECT IS X2 RC AT CONNECT IS X2 RC AT 17 DEFAULT MLEVEL IS ATOM MLEVEL IS CLASS AT 24 29 GGCAT IS LOC AT 24 GGCAT IS LOC AT 29

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME:

ECLEVEL IS LIM ON ALL NODES ALL RING(S) ARE ISOLATED

L38 34 SEA FILE=MARPAT SSS FUL L36 (MODIFIED ATTRIBUTES)

(FILE 'REGISTRY' ENTERED AT 12:05:21 ON 09 JAN 2009)
ACT R789F2/A

	_	
L1		STR
	(269)	SEA SSS FUL L1
L3	(,	STR
L4	61	SEA SUB=L2 SSS FUL L3
L5		SEA ABB=ON PLU=ON L4 AND NR=4
ЦЭ		
		D QUE STAT
		101 ENTERDED AT 10.10.21 ON 00 TAN 2000
т.С		JS' ENTERED AT 12:12:31 ON 09 JAN 2009
L6		SEA ABB=ON PLU=ON L5
L7		SEA ABB=ON PLU=ON L6 AND (PY<1993 OR AY<1993 OR PRY<1993)
L8		SEA ABB=ON PLU=ON L7 AND (NEOVASCULAR? OR NEO VASCULAR?
		OR ANGIOGENESIS OR ANTIANGIOGENESIS OR ANGIOGENETIC? OR
		ANTIANGIOGENETIC? OR ANGIOSTATIC? OR ANTIANGIOSTATIC?)
		ACT R789CT/A
		SEA ABB=ON PLU=ON ANGIOGENESIS+PFT/CT
L10	(11677)	SEA ABB=ON PLU=ON "ANGIOGENESIS INHIBITORS"+PFT/CT
L11	(6674)	SEA ABB=ON PLU=ON "ANGIOGENESIS (L) NEOVASCULARIZATION"+OLD/CT
L12	(1547)	SEA ABB=ON PLU=ON "EYE (L) NEOVASCULARIZATION"+OLD, PFT/CT
L13	(1030)	SEA ABBEON PLUEON "ANGIOGENESIS (L) NEOVASCULARIZATION,
		RETINAL"/CT
L14		SEA ABB=ON PLU=ON (L9 OR L10 OR L11 OR L12 OR L13)
L15		SEA ABB=ON PLU=ON L7 AND L14
L16		SEA ABB=ON PLU=ON L6 AND ((NEOVASCULAR? OR NEO VASCULAR?
		OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATIC) (5A) (INHIBIT
		? OR PREVENT?) OR ANTIANGIOGENESIS OR ANTI(W) (ANGIOGENESIS
		OR ANGIOSTATIC?) OR ANTIANGIOGENETIC? OR ANTIANGIOSTATIC?)
		SEA ABB=ON PLU=ON L16 AND EYE
L18		SEA ABB=ON PLU=ON L17 AND (ADMIN? OR DRUG(3A)DELIVER?)
L19		SEA ABB=ON PLU=ON L6 AND L14
		E EYE DISEASES+ALL/CT
		E E2+ALL
		SEA ABB=ON PLU=ON "EYE, DISEASE"+OLD, PFT/CT
L21		SEA ABB=ON PLU=ON L19 AND L20
		E DRUG DELIVERY SYSTEMS+ALL/CT
L22		SEA ABB=ON PLU=ON "DRUG DELIVERY SYSTEMS"/CT
L23		SEA ABB=ON PLU=ON L21 AND L22
L24		SEA ABB=ON PLU=ON L18 OR L23
		D 1-33 IBIB ABS HITSTR
		TNE, BIOSIS, EMBASE' ENTERED AT 12:23:08 ON 09 JAN 2009
L25		SEA ABB=ON PLU=ON L5
L26		SEA ABB=ON PLU=ON L25 AND (PY<1993 OR AY<1993 OR
		PRY<1993)
L27		SEA ABB=ON PLU=ON L26 AND (NEOVASCULAR? OR NEO VASCULAR?
		OR ANGIOGENESIS OR ANTIANGIOGENESIS OR ANGIOGENETIC? OR
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L28		SEA ABB=ON PLU=ON L26 AND L14
L29	327	SEA ABB=ON PLU=ON L25 AND ((NEOVASCULAR? OR NEO VASCULAR?
		OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATIC) (5A) (INHIBI
		T? OR PREVENT? OR TREAT? OR THERAP?) OR ANTIANGIOGENESIS
		OR ANTI(W)(ANGIOGENESIS OR ANGIOSTATIC?) OR ANTIANGIOGENETI
		C? OR ANTIANGIOSTATIC?)
L30		SEA ABB=ON PLU=ON L29 AND EYE
L31		DUP REM L30 (4 DUPLICATES REMOVED)
		D 1-10 IBIB ABS

	10/769471
L32	FILE 'CAPLUS' ENTERED AT 12:27:50 ON 09 JAN 2009 179 SEA ABB=ON PLU=ON L6 AND ((NEOVASCULAR? OR NEO VASCULAR? OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATIC) (5A) (INHIBIT ? OR PREVENT? OR TREAT? OR THERAP?) OR ANTIANGIOGENESIS OR ANTI(W) (ANGIOGENESIS OR ANGIOSTATIC?) OR ANTIANGIOGENETIC? OR ANTIANGIOSTATIC?)
L33 L34 L35	
L36 L37 L38	·
L39 L40	FILE 'CAPLUS' ENTERED AT 12:30:11 ON 09 JAN 2009 34 SEA ABB=ON PLU=ON L38 8 SEA ABB=ON PLU=ON L39 AND (PY<1993 OR AY<1993 OR PRY<1993)
L41	FILE 'MARPAT' ENTERED AT 12:30:59 ON 09 JAN 2009 8 SEA ABB=ON PLU=ON L40 D 1-8
L42	FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIX, JAPIO, PASCAL, DISSABS' ENTERED AT 12:32:41 ON 09 JAN 2009 912 SEA ABB=ON PLU=ON ("D'AMATO R"? OR "DAMATO R"? OR "D
	AMATO R"?)/AU
	186 SEA ABB=ON PLU=ON "FOLKMAN M"?/AU
	17 SEA ABB=ON PLU=ON L43 AND L42
	298 SEA ABB=ON PLU=ON ((L42 OR L43)) AND ((NEOVASCULAR? OR NEO VASCULAR? OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATIC) (5A) (INHIBIT? OR PREVENT? OR TREAT? OR THERAP?) OR ANTIANGIOGENESIS OR ANTI(W) (ANGIOGENESIS OR ANGIOSTATIC? OR ANGIOGENETIC?) OR ANGIOGENETIC?)
	60 SEA ABB=ON PLU=ON L45 AND EYE
L47	33 SEA ABB=ON PLU=ON L46 AND (ADMIN? OR DRUG(3A) DELIVER?) 20 SEA ABB=ON PLU=ON L47 AND (MAMMAL? OR HUMAN)
L48 L49	2 SEA ABB=ON PLU=ON L47 AND (MAMMAL! OR HOMAN) 2 SEA ABB=ON PLU=ON L44 AND ((NEOVASCULAR? OR NEO VASCULAR? OR ANGIOGENESIS OR ANGIOGENETIC OR ANGIOSTATIC) (5A) (INHIBIT? OR PREVENT? OR TREAT? OR THERAP?) OR ANTIANGIOGENESIS OR ANTI(W) (ANGIOGENESIS OR ANGIOSTATIC? OR ANGIOGENETIC?) OR ANTIANGIOGENETIC? OR ANTIANGIOSTATIC?)
L50 L51	21 SEA ABB=ON PLU=ON L48 OR L49 20 DUP REM L50 (1 DUPLICATE REMOVED) D 1-20 IBIB ABS
	FILE 'HOME' ENTERED AT 12:41:41 ON 09 JAN 2009 D QUE L5 D QUE L8

FILE REGISTRY

Property values tagged with IC are from the ${\tt ZIC/VINITI}$ data file provided by InfoChem.

STRUCTURE FILE UPDATES: 8 JAN 2009 HIGHEST RN 1093060-06-0 DICTIONARY FILE UPDATES: 8 JAN 2009 HIGHEST RN 1093060-06-0

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FILE CAPLUS

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FILE COVERS 1907 - 9 Jan 2009 VOL 150 ISS 3 FILE LAST UPDATED: 8 Jan 2009 (20090108/ED)

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FILE MEDLINE

FILE LAST UPDATED: 8 Jan 2009 (20090108/UP). FILE COVERS 1949 TO DAT

MEDLINE and LMEDLINE have been updated with the 2009 Medical Subject Headings (MeSH) vocabulary and tree numbers from the U.S. National L of Medicine (NLM). Additional information is available at

http://www.nlm.nih.gov/pubs/techbull/nd08/nd08_medline_data_changes_2

This file contains CAS Registry Numbers for easy and accurate substance identification.

See HELP RANGE before carrying out any RANGE search.

MEDLINE Accession Numbers (ANs) for records from 1950-1977 have been converted from 8 to 10 digits. Searches using an 8 or 10 digit AN will retrieve the same record. The 10-digit ANs can be expanded, searched, and displayed in all records from 1949 to the present.

FILE BIOSIS

FILE COVERS 1926 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 7 January 2009 (20090107/ED)

BIOSIS has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current BIOSIS indexing.

FILE EMBASE

FILE COVERS 1974 TO 9 Jan 2009 (20090109/ED)

EMBASE was reloaded on March 30, 2008.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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FILE MARPAT

FILE CONTENT: 1961-PRESENT VOL 149 ISS 26 (20090102/ED)

MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES (COVERAGE TO THESE DATES IS NOT COMPLETE):

```
US 20080287535 20 NOV 2008
DE 102008000872 13 NOV 2008
        1992620 19 NOV 2008
EP
JΡ
   2008291018 04 DEC 2008
WO
   2008141234 20 NOV 2008
        2449363 19 NOV 2008
GB
        2915993 14 NOV 2008
FR
RU
        2338533 20 NOV 2008
       2587880 04 NOV 2008
CA
```

Expanded G-group definition display now available.

The new MARPAT User Guide is now available at: http://www.cas.org/support/stngen/stndoc/marpat.html.

FILE WPIX

FILE LAST UPDATED: 3 JAN 2009 <20090103/UP>
MOST RECENT UPDATE: 200901 <200901/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE
>>> Now containing more than 1.2 million chemical structures in DCR <<

>>> IPC Reform backfile reclassifications have been loaded to end of September 2008. No update date (UP) has been created for the reclassified documents, but they can be identified by 20060101/UPI and 20061231/UPIC, 20070601/UPIC, 20071001/UPIC, 20071130/UPIC, 20080401/UPIC, 20080701/UPIC and 20081001/UPIC. ECLA reclassifications to mid August and US national classificatio

mid September 2008 have also been loaded. Update dates 20080401, 20080701 and 20081001/UPEC and /UPNC have been assigned to these.

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http://www.stn-international.de/training_center/patents/stn_guide.pdf

FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE http://scientific.thomsonreuters.com/support/patents/coverage/latestup

EXPLORE DERWENT WORLD PATENTS INDEX IN STN ANAVIST, VERSION 2.0: http://www.stn-international.com/DWPIAnaVist2_0608.html

>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <

FILE JAPIO

FILE LAST UPDATED: 27 NOV 2008 <20081127/UP>
MOST RECENT PUBLICATION DATE: 28 AUG 2008 <20080828/PD>

>>> GRAPHIC IMAGES AVAILABLE <<<

FILE PASCAL

FILE LAST UPDATED: 22 DEC 2008 <20081222/UP>
FILE COVERS 1977 TO DATE.

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